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JANUARY
1945

FEATURES

We Need An Air Shipping Clinic 7
By THOMAS WOLFE

A Necessity: Uniform Aviation and Insurance Programs 14
By RAYMOND A. LAWRENCE

Challenge of our Times 18
An interview with Representative Augustus W. Bennet

The Shape of Wings to Come 20
By GEOFFREY F. MORGAN

Boeing Announces Huge Counterpart of the Superfortress 30
The C-97 breaks the transcontinental speed record

The Air Age Reaches Paraguay 34
By MARY B. MACKRILL

NEWS

Correlation of Sea and Air Services . . 24
Spotlight on 1944 43

DEPARTMENTS

It's An Air World 26
By L. A. Goldsmith
Air Commerce 37
Airdom 38
By Richard Malkin
Legal Notes 28
By George Boochever
Airportation News 47
Congratulations from A. T. 52
Short Take-offs 58

***THE COVER**—A jeep rolls out of the rear of the Boeing C-97's fuselage and down a ramp which is self-contained in the plane and retracted by an electrically powered cargo hoist. The C-97 smashed all existing records when it streaked from Seattle to Washington, D. C., in six hours, three minutes, and 50 seconds. This huge plane is the cargo version of the famous* Superfortress.

JOHN F. BUDD, *Editor and Publisher*

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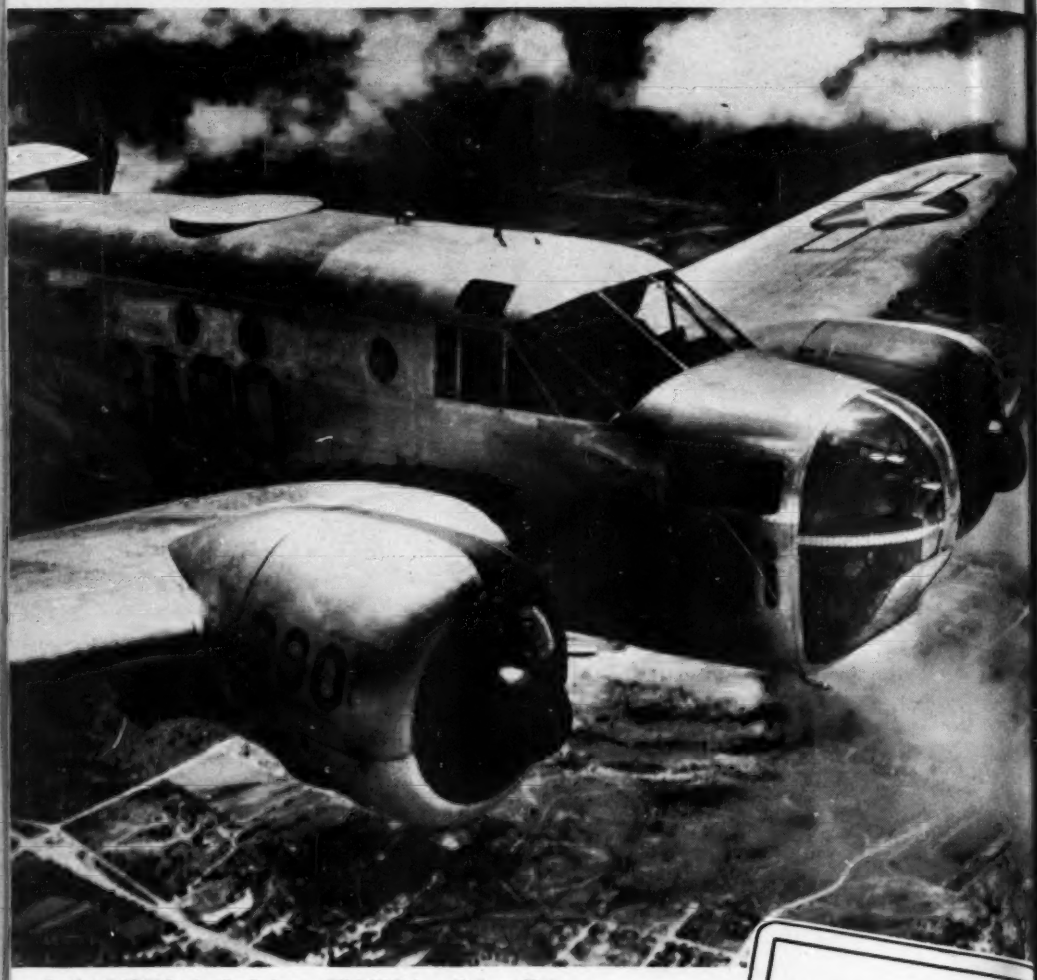

Beechcraft AT-11 Bombardier Trainer — Official U.S. Army Air Forces Photo

BOMBARDIER AT WORK

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WE NEED AN AIR-SHIPPING CLINIC

This masterful article highlights the problems as well as the important strides made in that glamorless phase of air transportation — packaging. But packaging holds one of the keys to the future of air cargo; and despite the technical advances hastened by the exigencies of war, Mr. Wolfe has issued a call for the establishment of a shipping clinic to develop reductions in space-waste and weight.

By THOMAS WOLFE
Vice President-Traffic, Western Air Lines

IN the efficient and economic distribution of goods by air, probably no factor is more important than that of packaging. The physical limitations of the airplane in load-carrying capacity both as to weight and space calls for carrying the minimum amount of dead weight to obtain the lowest cost in transporting merchandise. The savings to be obtained by use of lighter, more compact containers will not only have a material effect in reducing costs of the container and costs to the shipper and manufacturer and ultimately to the consumer but will also be important to the operator from the standpoint of stimulating expansion in air freight.

The problems of packaging appear to have less glamour than most of the problems relating to air transportation and yet the influence upon this industry as well as the shipper is great.

Relatively little research has been accomplished. In order to report on the latest progress in this article, the writer surveyed the progress being made by some 30 of the nation's outstanding packaging and container companies. Out of this group only 17 indicated evidence of interest in the general subject, and of the 17 only a handful had been taking air shipping problems seriously. It is from this latter group that considerable contribution has been made here.

At the outset of the war the problems of logistics were so complicated that the military forces requested the help of aircraft manufacturers and airline operators in determining, if possible, ways and means of delivering more net goods quicker and in more acceptable condition. Thus, the Air Cargo Research Association was formulated and thousands of shipments were analyzed totaling considerably over a million pounds in weight. Briefly, it was found that the tare weights were running around 40 percent of the shipments. This was tremendously costly to the taxpayer and to the military effort. Spoilage and breakage on overseas shipments by surface methods was running at an extraordinarily high rate. The airplane, fortunately, was able to reduce this latter problem substantially and through the medium of increased packaging efficiency coupled with reduction in tare weights made possible a great chapter in the early history of this war.

Ground Time Loss

From an operator's viewpoint, the problems of packaging are directly related to attainment of maximum speed—the essence of air transportation. Approximately one-half the loss in speed is caused by ground time. A large portion of this will be offset in the future by application of new handling and loading methods with probably the greatest factor being the design of future cargo carriers.

Today the greatest tonnages are being shipped over Army and Navy Transport Services from which we are gaining valuable experience in packaging for air shipment. The experiences of the military in transportation of freight by air should serve to help solve many of the packaging problems when they are made known at the conclusion of the war. What the NATS and the ATC have handled since the outbreak of war is a military secret, but an indication of the volume handled by these services might be gained

The Author

THOMAS WOLFE, vice-president in charge of traffic for Western Air Lines, Inc., has a backlog of 20 years' valuable experience in the aviation industry. He began his career in 1924 when he was named Secretary of the Chicago Association of the Commerce Aviation Committee and became a key figure in the inauguration of night air mail and the building of the Chicago Municipal Airport. In 1927 Mr. Wolfe served as traffic manager for the Chicago area of National Air Transport. In 1936, he was appointed to his present position with Western Air Lines, Inc.

Mr. Wolfe is a member of the Institute of Aeronautical Science, the Air Traffic Conference of America, and was national vice-chairman of the 1944 Air Transport Engineering Activity Committee of the Society of Automotive Engineers.

from an OWI statement that over one-fourth of all multi-engine aircraft manufactured in 1943 were transports which combined could carry a load of 20,000 tons of cargo on a single flight.

It is figured that approximately 60 percent of the freight received by the ATC for transshipment by air to overseas destinations is received via surface transportation. Much of this is repacked in order to effect substantial savings in tare weight and permit loading of additional material aboard the airplane and savings of as much as 250,000 pounds of payload, from each of the ports of air embarkation are understood to have been effected in this way.

Now being tested on every battlefront of the world are new sealing materials which eliminate damage by excessive temperature, humidity corrosion, mold formation and insect infestation, to rations, medical supplies, dehydrated foods and many other war products. Considerable progress has been made in packaging metal parts, machinery and hardware which rated highest in actual prewar air shipments. A new method makes use of moisture-proof wrapping together with a highly absorbent chemical which prevents corrosion during the time of shipment.

Considerable thought has been given to the preloading of cargo in containers or on platforms before loading in the airplane. It is recommended by cargo engineers that uniform standard containers be established in which packages or commodities without any packaging can be placed. This method would considerably reduce packaging requirements and tare weights, simplify the tie-down problem and permit maximum efficiency in handling and loading at terminals.

Development of specialized containers for certain repeat commodity shipments is also visualized. Moreover, substantial savings in handling might be enjoyed by the consignee. For example, shipments of ladies' garments on the retailers' own hangers in specially constructed containers would eliminate much of the handling cost necessary to place the produce on the sales racks. One container, already being used, weighs only 17½ pounds as against 147 pounds for surface shipping containers to hold 100 dresses.

The protective requirements for shipping by air differ substantially from those of surface transportation. Usually in air transport, less handling is required between points of embarkation and destination. On the other hand, allowance must be made for turbulent air and for that portion of traffic which may move by surface transportation for a part of the haul. *However, most of the hazards of surface transportation, such as sliding, dropping, puncture, compression-distortion caused by heavy loading, high piling, swaying and rolling, impact shear from standing and stopping action of rail cars, and exposure, are absent in air transportation.* Therefore, the strength and weight of packaging is not so necessary as in surface shipping.

Much progress has been made toward the development of new materials in an effort to reduce to absolute minimum the weight and size of the protective covering necessary for shipment by air.

LIVE BLOOD BY AIR—This is one of the portable refrigerators developed by the Navy for the air transportation of live blood to the war fronts. The refrigerator, which consists of a plywood case lined with Fiberglas insulation two inches thick, keeps the jars of blood at 50-degree temperature for over 60 hours at a stretch.

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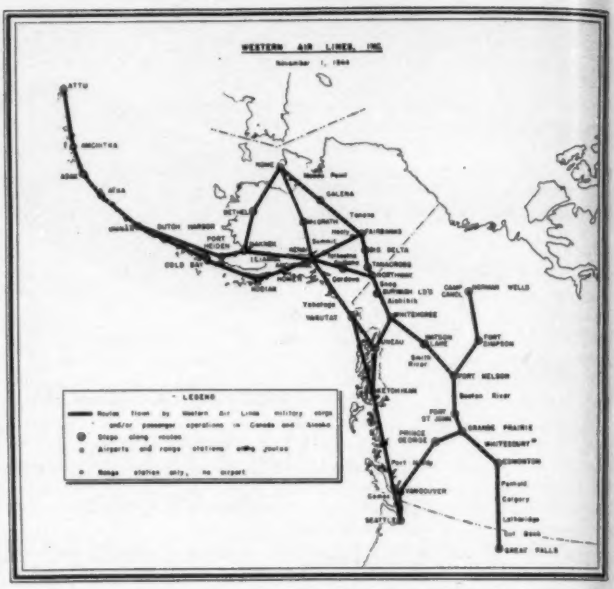


GRAND JOB—During the last three years, Western Air Lines has transported 16,006,556 pounds of cargo between the United States, Alaska, and the Aleutians. With its fleet of khaki-clad planes, varying from Douglas C-47s to Curtis C-46s, Western has flown a total of 13,855,249,806 cargo pound miles since Pearl Harbor, transporting many vital supplies to the Arctic war fronts. Total hours flown during these past few years of military service amount to 27,213:44, and with this total Western turned in the greatest record of aircraft utilization in the Alaskan Wing. Western reached a plane average of 15.9 hours per day, a figure which even exceeded the set goal. Despite the fact that the pioneering of Alaskan Wing routes has been signaled as one of the toughest jobs of the war, Western has maintained a perfect safety record with a total of 2,589 single trips between the United States, Canada and Alaska.

Application of any new materials developed for postwar packaging depends primarily upon their functional properties. It is axiomatic that the salesman is no better than the condition of the goods when it reaches its destination. The strength of the package must be substantial enough to withstand the rigors of shipment in providing the necessary protection and it is equally important that the cost factor be considered in the use of new lightweight materials.

Strongly advocated for air shipment of small odd-shaped items is the use of a thin, light in weight but strong *corrugated material* which combines the protective quality of corrugated paper with the folding qualities of heavy kraft wrapping paper. By wrapping and packing at the same time it is purported to eliminate the use of oversized cartons, excelsior and shredded paper for inner packing, thus providing substantial savings in shipping costs.

Good Shipping Features

Fibre containers, corrugated and solid, are believed by many packaging experts to play the biggest role in the shipment of goods by air. Incorporating such features as light weight, resistance to compression and impact, shock absorbency, insulation and relatively low cost, the fibre container should find many applications in air shipping. Certainly the successful record of over 30 years of use for surface transportation speaks well for the qualities of the fibre container. Moreover, the Army with its experience in shipping huge volumes of war supplies and Lend-Lease goods by air, has advocated the use of fibreboard boxes, weather-resistant and reinforced, if necessary, whenever weight and nature of contents permitted.

Plywood is receiving considerable attention and after the war will have an important place among the materials for air shipment packaging because of its light weight and strength. A moulded plywood container which has been developed, offers great possibilities in shipping and storing explosives, oil, rubber and chemical products which have a corrosive reaction on metal. This new container is claimed to be twice as strong as steel for the same weight and even lighter than heat-treated aluminum for a comparable weight. It is stated that oil and rubber companies are considering its use, and that the Department of Agriculture is considering this product for the transportation of clams, oysters and other fish. At its present stage, the plywood cylinder is more expensive than the usual steel drum. However, it is believed that savings in freight charges resulting from its lighter weight will tend to offset the difference in cost over a long re-use period.

In the *aluminum* field, a new thin-walled container capable of hermetic sealing when necessary, and developed for the use of the

food and pharmaceutical industries is expected to find application in the postwar packaging field. This new container is intended primarily for such small package products as dehydrated soups and vegetable juices, cheese and condiments as well as for pharmaceuticals in powder, pellet and liquid form. Principal advantage stated for this container is the saving in weight it affords. For example, the weight of container with a capacity of two ounces is one-fifth of an ounce. Eighty such containers would weigh only one pound and would hold sufficient dehydrated fruit or vegetable juices to make seven and one-half gallons (60 pounds) of the fluid product. *The combination of hydrated foodstuffs and lightweight containers is expected to reduce shipping costs greatly after the war.*

While the extent of penetration by *plastics* into the packaging field has not yet been clearly defined, it would appear that only a few seem to have postwar possibilities. In interior packaging, the lightweight semi-rigid transparent plastic container will probably play a greater role in packaging air shipments in peacetime.

Paper in Packaging

Application of *paper* to wartime packaging problems may result in many peacetime methods for air cargo packaging. One of these, the multiwall paper bag with its many purpose combination of plies, is now used for over 300 products, 50 percent of which are new since the beginning of the war. Laminated kraft is also expected to offer lightweight packaging possibilities in the postwar period. Extensive research is being conducted in the coating of paper to provide a heavy waterproof material for wrapping, including a "wet strength" treatment with resinous compounds which are expected to impart greater toughness to paper and increase its full endurance.

The need for maximum reduction in space occupancy and dead weight of the protective covering of air shipments is obvious. The development of new lightweight packaging methods will mean substantial savings in these items. It is the experience of the ATC that the percentage of tare weight on packages of 10 to 50 pounds for surface shipments averages 25 to 40 percent of the total weight, whereas a comparable tare for air shipments averages 12 to 15 percent depending upon the nature of the article being transported.

Looking to the enhancement of flavor and nutritive value from vine or tree ripening, thereby making possible premium prices, the shipment of perishables by air offers a vast potential for air commerce. By no means is the realization of this potential dependent *entirely* upon the solution of such problems as handling, refrigeration, heating, location of terminal facilities and the flexibility of service to provide for seasonal changes. It is the cost of transportation reflected in the premium paid by the consumer that will be the dominating factor in measuring this air-borne traffic.

The importance of packaging in the cost of transportation of perishables is manyfold. The decrease in the weight of the container will decrease the unit transportation cost. Also, packaging the product in the producing area into consumer-sized packages should serve to reduce handling costs. In addition, the elimination of waste and spoilage through ready-to-cook packaging should bring about lower transportatian costs in terms of usable product.

It has already been demonstrated that the prepackaging of produce after elimination of tops, bad leaves, stems and sand has been successfully transported by air bringing quick sales at higher prices. *The airplane must dispense with carting around garbage.* Fundamental factors from the standpoint of the retailer in favor of prepackaging of produce such as lettuce, spinach, peas, cauliflower and other perishables include the following:

1. **Sanitation; neatness of produce department.**
2. **Control of quality, value and full weight to customer.**
3. **Elimination of waste and spoilage.**
4. **Better control of profit; reduced losses.**
5. **Control of inventory.**
6. **Need for dating merchandise.**
7. **Faster service to customers; less clerk hire.**
8. **Branding of Merchandise.**
9. **Increased sales appeal.**
10. **Enhanced merchandising possibilities.**

Studies have been made which disclose that elimination of transshipment, unnecessary handling and protection permit the substitution of lighter containers in shipping perishables by air. For example, the saving in tare weight by substituting paper containers for strawberries is approximately 30 percent; for tomatoes, approximately 60 percent.

Problem in Perishables

One of the principal problems in connection with the shipment of perishables by air is the effect of lower temperature while the plane is flving in high altitudes with the possibility that the cargo may freeze. Installation of heating apparatus would seem to answer this threat, if it is found that insulated containers and covering will not adequately protect this type of cargo.

Precooling coupled with proper insulating

package covering is expected to preclude installation of heavy refrigeration equipment in the plane in cases where there is a possibility of perishable cargoes becoming over-heated on the ground or at low altitudes in hot climates. The cooler temperatures of high altitude should serve in large measure to offset this problem.

Future experimentation on different types of insulated containers and protective covering will provide much of the solution to problems of excessively high or low temperatures encountered by the plane. Some experimental work in this respect has already been completed. For example, experiments in shipping cut flowers showed that interior packings around the flowers of wet newspapers and cotton absorbed with water offered greater protection against freezing than did the so-called "dry pack" comprising dry cotton batting, balsam wood, aluminum foil, shredded newspapers and moss. Reasons given for the success of the "wet pack" were based on the theory that the latent heat in water is liberated during freezing and is conserved by outside insulation and thus provided a longer source of heat.

The effect of atmospheric pressure on shipments of perishables is not believed to be a serious problem. Experiments in connection with hatching eggs and cut flowers indicate that there is little need for concern over the lowered pressure of high altitudes.

Vast quantities of American goods, from hosiery to airplane engines, are being exported in increasing volume over a worldwide air freight system operated by the ATC, the NATS, and commercial airlines operating for the military. Attaining proportions heretofore undreamed of, the system now embraces 200,000 route miles of regular scheduled flights to every continent and over all oceans. Large quantities of strategic raw materials from all parts of the globe, destined to the United States, Great Britain and Russia are also being flown by these services. It is estimated that imports by air to the United States during the year 1943 amounted to 41,000,000 pounds. While this record has grown out of the exigencies of war, *the important role of the airplane as an international carrier in peace time is unquestionable.*

Unlike domestic shipments, packages for export receive much more severe treatment. An export package encounters loading onto the ship, stowage in the hold, exposure to shifting cargo and damp atmosphere during the voyage, unloading of the ship—in many instances with unskilled labor, perhaps with lighters—and finally transportation to destination by every conceivable means. Another hazard in export shipments is pilferage. The natives of many foreign countries show an amazing ingenuity in pilfering a portion of the contents without leaving any evidence on the outer container!

Weight Versus Tariffs

The lighter weight of container requirements for air shipment will have an additional advantage of reducing import tariffs in those countries where assessment is made on the basis of gross weight, legal weight or tare weight.

This is clearly illustrated by the experience of one of the largest manufacturers of electric refrigerators in connection with shipments to one of the South American countries. By substituting a sturdy fibreboard outer container with adequate interior protection for a heavy wooden crate, the reduction in weight effected a savings of $10 per refrigerator in customs duties.

Packaging for air is still in the development stage, with much of the reduction of waste in space and weight still to be sought.

The impetus of air transportation caused by the war has resulted in substantial progress in creating new methods and materials for air shipping and the conclusion of hostilities should find application of these new developments in civilian shipments.

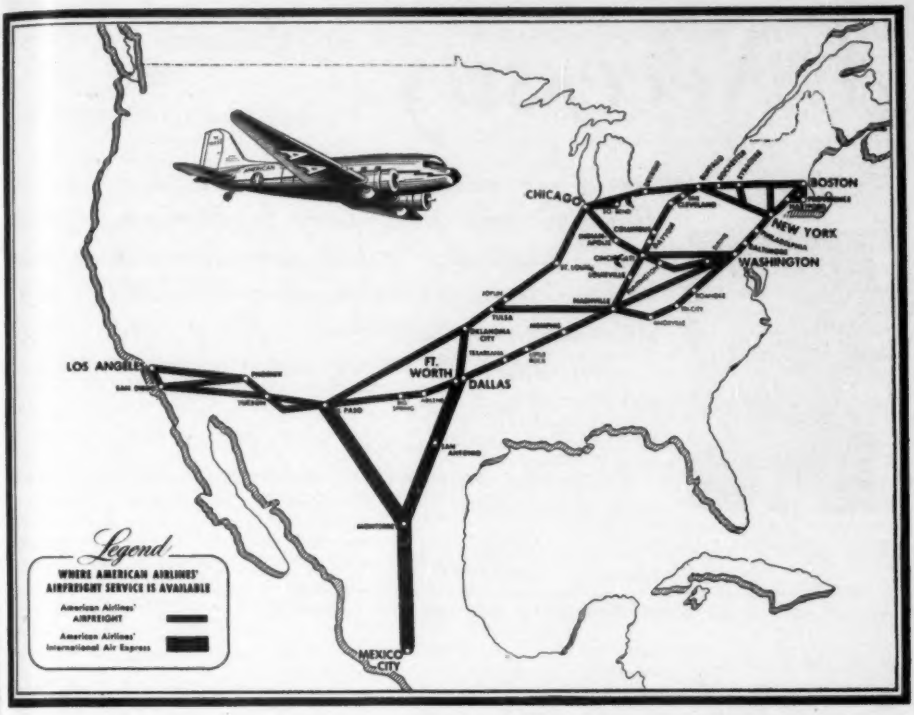
The opportunities to manufacturers and distributors for making and selling goods in the postwar period are without limit, but the maximum realization of these through air transportation will depend largely upon bringing into play the best skills and practices in packaging.

Education for the shipper whose present shipping department is accustomed only to packing for surface transportation will be necessary. To him the questions of whether weight of the container can be reduced and whether cost of shipping can be reduced will be of paramount importance.

A challenge is offered to the packaging engineer to incorporate all of the protective features required for air transportation with the least weight. Also to the design and construction engineers for the development of efficient handling and stowage methods. Most important perhaps is the challenge to the sales engineer of the airline to whom the task of educating the shippers will fall.

The writer firmly believes that the airline industry should join hands with the packaging and container manufacturers in carrying out concentrated research along the lines of problems discussed in this paper.

A shipping clinic contributed to by packaging manufacturers, aircraft manufacturers, airlines and cargo handlers would pay dividends. The problems are common to all and a cooperative movement along this line would benefit all of those concerned and eliminate a lot of waste and result in much needed and improved conditions within the scope of this general subject.



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AIRFREIGHT IN THE WAR

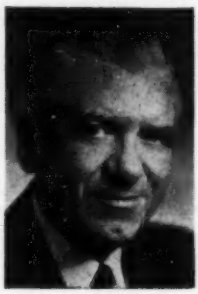
Currently, Airfreight is obtainable in much less volume than many shippers would desire. Essential war traffic gets first call in American's Flagships, leaving only small capacity for commercial Airfreight cargo. Nevertheless, present operation of Airfreight offers shippers a chance to test and perfect their plans in anticipation of its expanded post-war use.

AMERICAN AIRLINES *Inc.*

THE NATIONAL AND INTERNATIONAL ROUTE OF THE FLAGSHIPS

A Necessity: Uniform Aviation and Insurance Programs

"Without a national air policy with respect to uniform liability and insurance legislation," asks Mr. Lawrence, "what commitments could we make, as a nation, in any international aviation conference?" Here are some thoughtful, to-the-point arguments.



By Raymond A. Lawrence
Economic Analyst, Division of Economics and Statistics
United States Maritime Commission

[The opinions and statements in this article are the personal views of the writer and are not to be construed as official or reflecting the opinion of the United States Maritime Commission.
—*The Editor*]

TODAY'S newspapers, the current magazines on every newsstand, the radio and the *Congressional Record* are devoting unlimited space to the possibilities of postwar air transportation. Plans for postwar civil aviation are now receiving consideration by the State Department, several interested committees in the House and Senate, the United States Maritime Commission and the Civil Aeronautics Board, the scheduled airline operators and various members of the shipping industry. Much has been said in "forecasts," "long-range programs," studies and surveys of postwar aviation, and as a matter of public discussion it appears to be a most popular subject.

Generally speaking, these "projections" for the postwar American flag-carriers are glorious visions of the skies of the world crossed and re-crossed with air routes upon which are flown supercargo planes (with and/or without glider tows) carrying vast tonnages of freight and passengers speedily to distant lands. Perhaps! But before these flights of fancy can become a reality there are many earthly and fundamental problems to be solved and effectuated; solutions to problems which are important today and which will definitely have a direct influence upon the position of American flag-carriers in both the domestic and international fields of air transportation.

For instance, proposed aviation-liability legislation and the question of "legal liability." Over a period of some 30 years there has been an extensive program to determine where the aircraft operator's liability to his passengers began and where it ended. There have been numerous conventions of experts in international law, conventions of aviation associations, national conferences of bar associations and meetings of representatives of the various states, all making an earnest and sincere effort to clarify this most important phase of aviation. Notable among these conferences were the Warsaw Convention of October, 1929; the Rome Convention of May, 1933; and our own Uniform Liability Act of 1938. Recognizing the importance of these proposals, the Civil Aeronautics Board, in 1938, appointed an attorney of the General Counsel's staff to study and submit a report on the aviation-liability legislation proposed. This report, a most exhaustive digest and summarization, was released on June 1, 1941. In the 1942 Annual Report, the Civil Aeronautics Board stated:

> **"Reference was made in our last Annual Report to the exhaustive report on Uniform Aviation Liability Laws made by a member of the Board's staff which, although not formally considered by the Board, was released to many interested per-**

sons. The comments received from these persons show a considerable divergence of views with respect to many of the problems involved."

Federal Adoption Urged

In particular, this report recommended the adoption of a comprehensive Federal aviation-liability statute rather than the enactment of State aviation-liability laws. It also urged that the Government authorize a Federal agency to compel, by regulation, all classes of aircraft to carry liability insurance. The Civil Aeronautics Board, in its 1943 Annual Report stated, "the Board continued its study of American aviation insurance markets during the past year."

Aviation is a new and unique method of transportation and it is a well-known fact that new and swifter means of transportation create new demands for travel and commerce. However, new and unique as air transportation may be, there is ever present the possibility of accidents involving serious damage and injury to the general public, which should be adequately compensated. Recently Government agencies, concerned with the future problem of air traffic control, have estimated that by 1950 there will be between 8,000,000 and 10,000,000 aircraft movements annually by air common carriers and that the entire aircraft movements, both military and civil, will total between 45,000,000 and 50,000,000, the majority of these movements being by means of civil aircraft. Government traffic-control administrators are, today, actually planning for a total of 500,000 aircraft, civilian and military, by 1950. In view of this anticipated air transport traffic, can there be any reasonable cause for further delay in enacting legislation relative to uniform aviation liability? In August, 1943, Webb Shadle, General Counsel of the Civil Aeronautics Administration, addressing the Insurance Section of the American Bar Association, in Chicago, predicted that:

1. **The Federal Government would exercise its jurisdiction over the air space of the United States for air navigation.**
2. **Uniform liability would be enacted.**
3. **The air passenger would be assured of maximum compensation for injury or death, or loss or damage to his property.**
4. **The Federal Government might enter the aviation insurance business in order to assist, if necessary, the domestic companies in solving their reinsurance problems.**

Situation Stands Pat

These statements, or predictions, if you wish, were made over a year ago. The situation remains unchanged. Just so long as we continue to fly mechanical means, there remains the possibility of accidents and no amount of prevention, no elaborate safety program, can undo the injuries and damages after the accident occurs. And further, so long as there are aircraft accidents causing injury and death to passengers, crews, and persons on the ground, the liability of the operator in respect thereto will necessitate determination by proper and established legal processes. Legislation should be established now.

Since early in 1943, various proposals for amending the present Civil Aeronautics Act have been submitted to Congress, such as the Lea Bill, the Reece Bill, and the McCarran Bill. There are many controversial proposals embodied in these proposed amendments, too many to discuss here, but, nevertheless, important in the formulation of a national air-transportation policy. Of primary importance in preparing a solid foundation for a national air policy are the questions involving:

1. **Freedom of the Air—What does it mean and how far will this Government go in scrapping the terms of the Paris Convention of 1919?**
2. **Commercial rights on airports built in foreign natiors with funds of nations other than the nation in whose jurisdiction these airports are now situated.**
3. **The Chosen Instrument or regulated competition for our American-flag air carriers.**
4. **The participation of other forms of transportation, such as steamship companies, in air transportation.**
5. **The location of our international airports—as a question of national security in the postwar air-transportation era, on the coast, as now existent, or located in the interior of the country.**
6. **Aviation insurance and reinsurance.**

It has been said that "aviation insurance is to be the constant companion of air transportation," and obviously, there can be no controversy regarding this association. But, have we as a nation, taken any constructive action toward furthering this natural alliance? In 1938 when the present Civil Aeronautics Act was enacted, the air lines were experiencing some difficulties in securing in-

The Author

An alumnus of Dartmouth, Class of 1916, RAYMOND A. LAWRENCE served as ordnance officer in the United States Army during the first World War. In 1924 he became manager of the claims department of the Hull Insurance Agency, Fargo, North Dakota; and two years later the Westchester Fire Insurance Company appointed him state agent in the Dakotas and Western Minnesota. He was elected to the vice presidency of the Hull Insurance Agency in 1928.

The year of the crash, Mr. Lawrence entered into the post of assistant manager of the insurance division of the Electric Bond and Share Company, New York, and affiliated companies. In 1932 he turned up as manager of the insurance division of the American and Foreign Power Company, New York. Six years later he became one of eight appointees as technical advisers to the Bureau of Old Age Benefits of the Social Security Board. Serving as a member of the Field Service Committee which originated and established the present national field office organization for the adjudication of claims, Mr. Lawrence entered the United States Maritime Commission the following year.

At the present time, Mr. Lawrence is economic analyst and assistant to the chief of the Transportation Section of the Division of Economics and Statistics.

surance. In fact, that situation was one of the problems of the industry and specific legislation regarding insurance was omitted from the Act in hopes that the immediate future would develop some experience from which the problem might be solved. However, now, late in 1944, the situation remains unchanged. Studies have been continuously made of American aviation insurance companies and available markets by Government agencies and trade associations.

Previous Report Cited

We have had the Sweeney Report, the Molnar Report, the Braniff Plan, and the Air Line Company Plan, to mention only a few. Presently before Congress are many legislative proposals to amend the existing Civil Aeronautics Act and even though controversial in subjects proposed, all are in agreement in one instance—that of aviation insurance. Briefly, these proposals provide:

1. **The Commission (now the Board) shall keep itself informed concerning the business of insuring and reinsuring aviation risks.**
2. **The Commission is "authorized and directed" to consult with and make recommendations to the agencies of the various States concerning the adequacy and reasonableness of insurance and reinsurance for aviation risks.**
3. **The Commission shall, from time to time, report to Congress concerning the adequacy and reasonableness of aviation insurance and reinsurance available for civil aeronautics; whether the market is consistent with the public interest and "such other matters relating to such insurance as it may deem to be appropriate"; and the advisability and cost of providing reinsurance by the Government for aviation risks.**

The magnitude and scope of these insurance proposals are tremendous and impose upon the regulatory board insurance duties and responsibilities which may be extremely difficult to meet. Through the enactment of these, or similar proposals, the board is definitely "ordered and directed" actively to participate in the business of aviation insurance and reinsurance not only for the scheduled airline operators, but also for "persons engaged in civil aeronautics," "persons engaged in the business of aviation insurance and reinsurance," "persons engaged in air commerce," and "such other matters relating to such insurance as it may deem to be appropriate." A most comprehensive and extensive insurance program for any organization in Government or in private enterprise!

"Foreign Insurance Companies"

Even though pending legislative bills may be uniform regarding insurance proposals, that uniformity is non-existent elsewhere. Arguments have been presented against so-called "foreign insurance companies" participating in the American aviation-insurance market on the theory that such activity would be inimical to our national security; charges have been loosely made that the present American aviation-insurance market is monopolistic, yet, these same organizations have recommended an aviation-insurance plan which, if adopted, would provide for 15 years, at least, a complete insurance monopoly of the schedule airline operating companies; "experts" and "consultants" have lent added confusion and indecision.

If there is a need for uniform aviation-liability legislation, then there is a need for a uniform aviation-insurance program. Insurance and liability go hand-in-hand; if there were never any liability, there would be no need for insurance. And legislation is still on order!

On November 1, more than 50 nations, at the invitation of the United States, attended an international conference on civil aviation in Chicago. The desirability of holding such a conference was indicated during the exploratory conferences with several countries earlier in the year.

Without a national air policy with respect to uniform liability and insurance legislation, what commitments could we make, as a nation, in any international aviation conference? Furthermore, until present world-wide hostilities have ceased, other than holding conferences, what can be accomplished in regard to hauling rights, for instance, in Continental Europe and the islands of the Pacific?

But, if we, as a nation, are to play the role in international air transportation now within our grasp, if we as a nation, are to build for the future, as we have in the past, then we must first establish a sound, efficient and workable national policy. The stakes are high! A new system of transportation, nation-wide, world-wide, providing services at low cost and bringing opportunities to passengers and shippers for communication, trade and travel previously unknown!

Federal and State Officials Push Three New State Laws

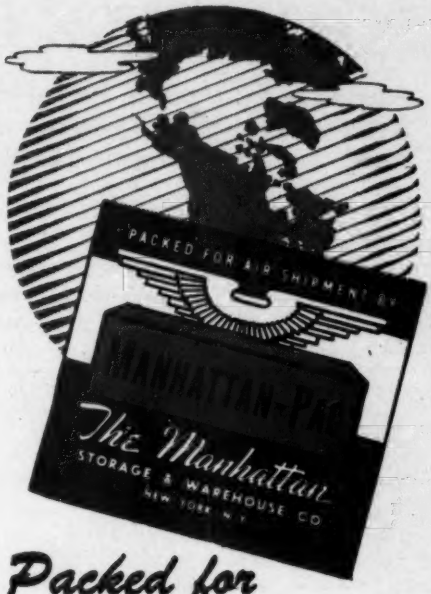
If three new State laws, upon which Federal and State aviation officials are agreed to push, can be passed, the confidently expected result will be a uniformity of State aviation policy.

Details covered by the proposed acts will make State legislation consistent with Federal regulations and will facilitate the coming airport program recently proposed by the CAA. No economic regulation of commercial transportation by the States is provided for in the proposed acts.

The groups which have worked on the drafts agree that the adoption of uniform laws will provide the authority and machinery necessary to permit the States and their political subdivisions to play appropriate parts in the future development of aviation, and avoid the State-Federal conflicts in safety regulation and enforcement that have plagued other forms of transportation.

A State Aeronautical Department Act and a State Airports Act were drafted by the National Association of State Aviation Officials, and a Model State Airport Zoning Act was drafted by the National Institute of Municipal Law Officers. All were framed after consultation with the Civil Aeronautics Administration officials, and have been approved by the NASAO and the Council of State Governments. They also have general CAA endorsement.

Particularly important is the suggested model zoning act. This would give political subdivisions such as cities and counties authority to adopt airport zoning ordinances limiting the height of adjacent structures and objects of natural growth, and regulating the use of land in the vicinity of airports, in order to protect their aerial approaches.



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"CHALLENGE OF OUR TIMES"

Augustus W. Bennet, a World War I Flier Now in Congress, Asserts Himself on Postwar Aviation and Cautions Against Adopting a "Helicopter Mentality on a Buzzbomb Problem"

AIR TRANSPORTATION had a threefold purpose in interviewing Representative Augustus W. Bennet of New York. *First:* his successful campaign for election was second in national and international interest only to the Presidential contest, for the reason that his opponent, Congressman Hamilton Fish, was one of the most controversial figures in the history of modern American politics. *Second:* the attitude of the new Congress, and more especially that of its freshman members, is of paramount importance to the future of America's postwar civil aviation. And third: Mr. Bennet is an old-time flier himself.

His interest began following the last war when he volunteered for the United States Naval Reserve Flying Corps, and trained in an HS2 flying boat off the Rockaways. The HS2s, powered with Liberty motors, and slow and heavy by modern standards, were supposed to frighten away submarines. But by the time they got into operation, the enemy's submarines had all gone home; and that after a period of training, was where Gus Bennet went, too.

A. W. Bennet

"Home" for Congressman Bennet, then New York City, but in 1921 he moved to Newburgh, in Orange County, New York. Becoming an active participant in community life, he foresaw what civil aviation would mean to the development of his city and county in the coming years. There was talk of the establishment of a Boston-Hartford-Newburgh-and-points-west airline. There was obvious commercial advantage to be gained in any case by an airport. But in the back of Gus Bennet's mind, having been a naval flier first, was the conviction that an airport near Newburgh must ultimately become an airport for West Point, a dozen miles to the south. The site for the United States Military Academy was hardly selected with the Air Age in mind, although from the beginning of World War I it was clear that West Point must have an airport as an adjunct.

In 1925, therefore, Bennet accepted the chairmanship of a joint committee of the Newburgh Chamber of Commerce and Galloway Post of the American Legion, assigned to find a site for an airport. It proved to be a fruitful but adventurous assignment, which began with a survey flight and ended in a crackup.

Flying a big lumbering *Standard*, Bennet and a friend surveyed the terrain around Newburgh, and decided that the most feasible area was a bleak stretch of ground called Stony Lonesome, two miles outside the city, on the main east-west highway. It had the inevitable power lines at one end of the field and a swamp at another point, but it was relatively flat and convertible. Moreover, there was a public-spirited citizen, Samuel L. Stewart, who was prepared to present the ground to the city.

The fliers' immediate problem was to get back down to terra firma and report their findings. Spotting a likely field, hardly more than a farmer's backyard, they started in for a landing when they found themselves heading straight for a powerline. There was a split second of flight straight for the moon. Then they pancaked. The powerline came out the winner. The *Standard* was a complete wreck.

"We were severely shaken up," Bennet says, 'but our ardor was intact."

Intact, too, was the Bennet conviction as to the ultimate use of Stewart Field. It took most of the leaf-raking Thirties to convert Stony Lonesome into an airport (shades of Saipan!) and West Point took it over before it was ever put to commercial use.

Today Stewart Field, with a complement of a thousand men, is known as "the wings of West Point." Today also, incidentally, the civil authorities are again looking for a commercial aviation field in the Newburgh area, and the CAB has recommended a class III airport for the city.

In the years since World War I, Congressman Bennet has been a constant and enthusiastic user of commercial airlines in this country; and in pre-war years he flew extensively over Europe. A tourist's flight over the Panama Canal in 1933 set him pondering how freedom of the air could be maintained this side of the millenium, since freedom to traverse by plane implies also the potentiality of dropping bombs enroute, unless we achieve a degree of moral responsibility among men

and nations beyond anything yet evoked.

Instinctively and by tradition a believer in free enterprise, however, he feels that aviation will develop and thrive best in an atmosphere of unrestricted competition; he doubts the wisdom and indeed the feasibility of cartelization of the air, either by private enterprise or by nations.

At the same time, he is convinced that the development of controls which will insure the widest possible peaceful use of airpower for the benefit of mankind is perhaps the greatest and most urgent tasks of this generation, perhaps even of this Congress. It will not wait.

"We can't use a helicopter mentality on the buzzbomb problem," he told AIR TRANSPORTATION. "The speed of airpower development is the most impressive and at the same time the most terrifying fact of our times. Air Marshal Billy Bishop's book, *Winged Peace*, written last spring, and revised last June, was obsolete before it was off the presses in the fall. Jet and rocket propulsion have introduced factors into the aviation picture which are no longer consonant with the temporizing debates of statesmen. As Bishop says: 'We have got to trust each other in the air or we shall soon be taxiing out for the first take-off of World War III.'

"I believe with Dr. J. Parker Van Zandt that a *maximum use of commercial aviation by the peoples of the world will contribute enormously to the basic understanding among men which will insure peace.*

"But even more important than maximum use is the philosophy which is going to govern maximum use. The United States' goal as Berle phrased it at the Chicago conference, is for freedom of the air; the British goal, at the opposite end of the pole, is for organization of the air. It is the ancient dilemma with which mankind has wrestled through the ages—the dilemma of freedom versus organization. But the Air Age has abolished the luxury of endless compromise by which we have heretofore met this dilemma. You can't compromise with a buzzbomb. We must find political solutions for the peaceful development of the Air Age as sharp and clear and bold as a drawing-board diagram—a diagram without bugs.

"I believe that our American aim of free development by private enterprise is the better aim. But no one can doubt but that it places a degree of national and international responsibility upon the aviation industry such as was never before exacted. It is the gravest and most immediate challenge of our times."

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THE SHAPE OF WINGS TO COME

Beware of rash predictions, the author warns, pointing a stern finger at that magic word called Facts. He pricks many an over-inflated balloon, citing the differences of opinion "even among those who are best qualified to speak." Rather, he calls for long-range postwar planning.

By GEOFFREY F. MORGAN
Douglas Aircraft Company, Inc.

IT was Marshal Villars of France who said that if Heaven would only defend him from his friends, he could defend himself from his enemies. I often think, when I read the rash predictions that are being made so freely concerning the future of aviation, that the aircraft industry has good reason to echo the marshal's sentiments. One can hardly read a paper nowadays or listen to a radio program or scan the illustrated magazines without finding sadly exaggerated claims concerning the probable size, speed, and range of postwar aircraft.

Of course, a part of this confusion is due to the exigencies of war, since the public naturally finds it difficult to distinguish between what is necessary in war and what will be desirable in peace. Increased speed, range, and size would obviously work to our advantage in attacking both Germany and Japan; but the long-range superplane, which is such an asset in bombing Tokyo, might obviously prove a corresponding liability in commercial aviation.

In short, we in the aircraft industry are convinced that while the realities of flight in 1950 and beyond will greatly exceed our present standards and achievements, they will fall equally short of the extravagant predictions which have been made by aviation enthusiasts with more heat than light.

Before developing the subject it must be emphasized that there will be at least three separate classes of airplanes in the postwar world. The first will be the military planes. Regardless of the size of our postwar military strength, it seems obvious that we must have an adequate fleet of planes in the air. These military aircraft were all designed for war, and with a few exceptions it will not be profitable or possible to convert them to peacetime uses. Presumably the Government will maintain great military air bases which must be adequately staffed with trained personnel and equipment to handle all the mighty war planes.

The Transport Plane

The second group, and one which probably deserves a major share of attention, is the transport plane which will be built for service on the commercial airlines. At the present time, most of the major lines are entirely equipped with the Douglas DC-3, a 21-passenger plane which thus becomes the standard as a public carrier. Only the interruption of war prevented the DC-4—the 44-passenger plane, carrying a crew of five as well as baggage and express at a cruising speed of 240 miles an hour—from coming into equally widespread use. More than $100,000,000 worth of DC-4s have already been ordered by several of the nation's major airlines for postwar use.

New postwar planes have recently been announced by Douglas. The first is the DC-6, an enlarged model of the DC-4. It is slightly more than 100 feet in length and its four engines develop 6,800 horsepower. It will cruise at better than 330 miles per hour with a gross load of 63,000 pounds, carrying 55 passengers and a crew of six. More spectacular, however, is the newly designed DC-7. One of the several interior arrangements of this plane will carry 108 passengers and a crew of 13. It will have four super-engines of 2,100 horsepower each. Pressurized cabins will permit comfortable flights at 20,000 feet altitude. One contract alone for these new super air leviathans amounts to $40,000,000.

For feeder line operation Douglas has designed the *Skybus*, a plane with movable bulkheads, permitting an increase of cargo space if the passenger load is light, or vice versa.

Whether or not there will be any freight planes depends chiefly on what is meant by the word "freight." As long as men haul brick and stone, coal and iron, sand and lumber and cement, they will haul it on land and sea; but they will certainly never try to fly it through the air. Air cargo will be more in the nature of express, and it will fall chiefly in such classes as the following:

The Four Categories

First: *letter mail.* Many people believe that by 1950 and beyond all first-class mail will go by air, especially when the distance is 500 miles or more.

Second: *emergency cargo.* This is the only time when the load might take on the character of freight if the emergency were great enough. The breakdown of a printing press, a pumping plant, or a powerhouse might give rise to an emergency so grave that the owner would be justified in transporting even heavy machinery by air. But this would be an exception rather than the rule since the breakdown of even the greatest machinery can generally be traced to the failure of some critical part, rather than the whole equipment.

Third: *perishable goods.* This would include such items as flowers, fruits, vegetables, and sea food. Even at present orchids are sometimes flown across the country, and it seems altogether likely that cut flowers of all kinds may be grown in the open air in our warmer states and then carried north before they have time to fade. The same is true of fruits and vegetables, and already produce wholesalers are calculating the exact reduction in shipping costs which must be made before it will be feasible to transport strawberries from California, peaches from Georgia, celery from Michigan, or sea food from the Gulf.

Fourth: *valuable cargo.* This category includes any item combining high value with small content. Drugs, watches, fountain pens, kodaks, jewelry, precious stones, and similar items are all natural air cargo.

Now what about the passengers? One thing is certain; they will travel in great comfort and convenience because they are doing that today. Present transport planes are so well soundproofed, air conditioned, and free from vibration that air travel is often more comfortable than travel on the ground. High as the safety factor is at present, it will be even higher in the postwar world for the simple reason that some of the secret devices now restricted to wartime use will be later available in the commercial field.

Comforts for Passengers

Since time is of the essence in aviation, many of the transport planes will travel at night. This means that seats can be made up into beds; berths may be let down from the wall, and some of the luxury planes will undoubtedly have separate staterooms for parties of two, three or four people.

Not every plane will be a sleeper plane, however, for the simple reason that you can always carry more people sitting up than lying down, and for this reason some of the transports will have nothing more than reclining chairs, where a passenger may doze through the night, knowing that he will be there in the morning anyhow. Separate dressing rooms will be available for men and women, together with running hot and cold water and electric outlets for the modern razor.

These planes, cruising at about 250 miles an hour, fall far short of the 500- and 600-mile speeds which have been so freely predicted. Unhappily there is no airplane in the world today which is capable of making 500 miles an hour; but even if it were possible in time of war, the added wear, together with the extra gasoline consumption, would be highly extravagant and inefficient in time of peace.

Even a rate of 250 miles an hour will widen the horizons of civilian travel to an astonishing degree. One of the great commercial airlines recently announced a schedule which is doubly interesting in this connection. Typical travel schedules all measured from New York would be: to Los Angeles or San Francisco, 10 hours; to London, 14; to Paris, 15; and to Berlin, 16 —while a trip from New York City to Cairo or Jerusalem would require an even 24 hours. Turning our steps to the west, the flight from San Francisco to Hawaii will be 10 hours, and another 24 hours will take you to Australia. The longest distance is indicated in the scheduled flight from New York City to Hong Kong or to the Cape of Good Hope, both of which will require less than 48 hours' flying time.

Under these circumstances it seems quite reasonable to suppose that foreign air travel will increase to 10 or 20 times its present volume, and the majority of the new postwar travelers will not be people who used to ride the railway or the steamer; they will be people who never had the time to ride at all until air transportation made it possible.

The Cost Problem

Aside from the consideration of time, we also have the problem of cost. Edward Warner, vice president of CAB, said recently that we might expect the passenger rate within the United States to drop as low as three cents a mile, within the next few years. This would represent a considerable reduction over the present rate.

The same airline which published the timetable estimates that the round-trip fare from New York to London by air will be $186; to Paris, $202, and to Moscow, $260. From New York to Honolulu the figure is $272, and the top cost announced was New York City to Hong Kong and return, $594.

Few topics have been the subject of more widespread debate than the probable cost of cargo shipment in air transportation. Quoting Mr. Warner again, a cargo rate of 18 cents per ton mile was predicted as a reasonable cost in postwar air haulage. While this figure represents a tremendous reduction from the present average of 70-80 cents per ton mile, it is still higher than the figures advanced by C. I. Stanton, CAA administrator, in his address at the United States Conference of Mayors in Chicago, when he said we might ultimately anticipate a reduction to somewhere between 10 and 15 cents per ton mile. These quotations are especially appropriate because they show the difference of opinion existing even among those who are best qualified to speak. *One thing is certain:* the costs will always be comparable to express rather than freight rates, and for that reason commercial dealers will doubtless restrict their shipments to certain specialized items.

There is one other point of general interest and that is the probable range of these commercial planes. Just as the speed will probably be less than half the figures predicted, it seems likely that the range will be restricted to 2,500 miles as a maximum. The distance that a plane can fly non-stop is obviously measured by its load of gasoline. All the great four-motored planes in use today average around a mile per gallon of gasoline consumption. In other words, a plane which has to fly 1,000 miles non-stop must lift 1,000 gallons of gasoline in its tanks. Long-range flights would obviously require such heavy loads of fuel that there would be no lifting capacity left for a profitable pay load.

At least a part of the misunderstanding concerning the maximum range is due to the belief that planes must fly great distances over water, but this is a mistaken notion. As a matter of fact, the longest water flight on any route is the jump from San Francisco to Hawaii, which is less than 2,400 miles.

Plane Unlike Automobile

What about the private craft for individual use? Despite the numerous predictions, we in the aircraft industry are not at all convinced that airplanes will ever be as common as automobiles are today. Perhaps the best plan would be to take a leaf out of Patrick Henry's book and try to judge the future by the past. Before Pearl Harbor there were about 25,000 private planes in the United States and if, as some authorities believe, there are at least four fliers for every plane, we may suppose there were 100,000 civilian pilots at that time. Many of these men have since become active in the Civil Air Patrol, a more or less voluntary group which has done yeoman service in promoting interest in aviation and recruiting members for the Army Air Corps.

Of course, the biggest change that has come since Pearl Harbor has been the enlistment of the mighty Air Force which seems likely to reach a total of three million men before the war is over. About 300,000 of these young men are expert pilots, and while the others may never have held the stick, they certainly have learned the thrill of flying.

Another class of probable customers will be the sportsmen. And there are some business men, especially in the great open spaces of the West, who may find planes extremely useful in the conduct of their business.

Even when we take all these groups into consideration, it is evident that they will form only a small minority of the population. There are too many considerations involved to allow the airplane ever to come in quite the same class as the automobile. In the first place, its uses are somewhat limited. Few men would want to travel by air unless their journey involved several hundred miles, and most of us do not go so far often enough to justify the cost of owning a plane for the occasional trip.

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In the second place, piloting a plane involves more skill both in operation and navigation than driving an automobile would ever do. Weather is always a hazard in flying and the consequence is that a man might fly a few hundred miles in brilliant sunshine only to find himself in rain, hail, sleet, snow and storm, or fog. Commercial planes fly on established routes with radio beams and automatic signals, two-way radio and every kind of safeguard and production. Private fliers, on the other hand, would be following uncharted courses, and they would need to be highly expert, both as pilots and navigators.

It may be helpful to remind one that the OWI believes that we may easily have 500,000 planes in the United States by 1950. Since everyone agrees that there will certainly be 25 million automobiles by the same year, it is evident that the ratio of planes to cars will be as one to 50. One tning is certain and tne rest is lies, as Omar used to say; there is no field in which wise, thoughtful, and long-range postwar planning is more essential than in the whole debated and debatable field of aviation.

Helicopters, or some kind of rotating wing aircraft, will undoubtedly be one of the important types of air transportation, both for public and private use when once they are perfected. Unhappily, the general public does not realize that the helicopter is still in the experimental stage. In fact, many engineers think that the helicopter stands today where the airplane did in 1910.

Airports have come to be regarded as falling in four different classes. Class I involves a runway of 1,500-2,500 feet; Class II, 2,500-3,500 feet; Class III, 3,500-4,500 feet; and Class IV, or major airports, 4,500-5,500 feet, with a standard runway reckoned at one mile. This means, of course, that with few exceptions, the air fields of the country must always be located from 10 to 15 miles away from the business part of the city, which involves corresponding delays for the passengers who have to traverse the crowded city streets. Since helicopters require no runway of any kind, it would be entirely practical for them to take off from the roof of the post office or hotel or from a vacant lot nearby, and provide a direct shuttle service to the airport in a few minutes time.

Construction of even the smaller airports involves considerable outlay, both for initial cost and upkeep, and it is hardly likely that smaller communities could afford to build or maintain adequate equipment; but even the smallest town could furnish a vacant lot, and consequently the helicopter would afford a branch line service to the larger cities with larger facilities.

One of the first things we will have to learn after the war is to read a new kind of world map. All our lives we have been accustomed to studying flat maps spread out from right to left with the equator running as a heavy horizontal line across the center of the page.

Tomorrow's map will show that same equator as the circumference of a great circle, which has the north pole as its center point; and the great trade routes of the world, while they will not lie directly across the pole, will lie so near as to come well within the Arctic Circle. Instead of traveling east and west, as men do now to reach Europe or Asia, a large proportion of the traffic will be up over the top of the world and down the other side, with way stations at either Greenland or Iceland on one side the pole, or Fairbanks, Alaska, on the other, and air routes fanning out to Moscow, Bombay, Calcutta, and Hong Kong.

GOOD NEIGHBORS IN BROOKLYN—The Mexican scene depicted above was part of the recent exhibit sponsored by The Brooklyn Daily Eagle in cooperation with the Coordinator of Inter-American Affairs and American Airlines. It was designed by Harold J. Laird, AA's display manager.

NFAS Demands Liberalized Policy On Correlation of Sea, Air Services

"THE vital public interest in a strong merchant marine should determine Government policy in deciding applications of American flag shipping lines seeking to engage in overseas air commerce on an equal footing with other nations."

This was the crux of a statement issued in Washington by the National Federation of American Shipping on behalf of American shipping lines seeking certificates from the Civil Aeronautics Board to correlate air service with their operations.

Pointing out that our merchant marine is the only great industry 100 percent engaged in war operations, the federation's statement strongly emphasized the necessity for a liberal policy on overseas aviation.

"Of the total of more than 100 American shipping companies now engaged in the vital task of supplying our armies overseas only eight have sought air certificates," the statement declares.

"The lack of a Government policy with respect to international sea and air transportation prevents the applicant steamship lines from planning their requirements for passenger ships at a time when their importance as troop transports is being dramatically demonstrated."

Public attention was sharply focused on this point recently when one of the steamship companies was compelled to cancel its application to the Maritime Commission to build three new passenger ships because of the competitive factor of air service.

"This uncertainty on the part of one applicant is common to all the others and becomes aggravated by the fact that the merchant marine of other great maritime powers will almost certainly employ all the advantages of combined ship-air service," the statement continues. "By doing so they will be able to estimate their passenger shipping requirements in proper relationship to their aviation requirements and thus evolve an efficient unified plan of operation. If the American merchant marine cannot so plan, it obviously will be placed at a critical disadvantage. Because of the vital part it is playing in this war and because of its ever-growing importance as an instrument of national security and economic stability, it would seem most unwise and even destructive to impose further handicaps upon it."

The Federation's statement made it clear that the American flag steamship lines applying for air certificates sought no preferential treatment even on the ground of national defense.

"The applicant companies ask only that the circumstance of being steamship companies, rather than some other kind of company, be not held against them in the consideration of air applications," the statement continues. "They seek only the right to be considered on an equal footing with all other applicants and the determining factor should always be the public interest.

"The applicant steamship companies do not suggest any departure from the principles of limited and selective competition or ask for special treatment of any kind. They neither suggest nor seek blanket approval of their applications. They reaffirm their belief in the policy of regulated competition in the public interest. The case of each applicant stands alone, to be judged solely by the criterion of public convenience and necessity and the ability to serve the nation's overseas transportation needs.

"It is obvious that all of the steamship applicants do not believe that they are entitled automatically to certificates of operation any more than to airline applicants. The test should be the number of constructively competitive services justified by traffic potentials. Which applicant or applicants may be best qualified to provide that service in the overall public interest is determined by the Civil Aeronautics Board."

The whole question of American steamship lines participating in overseas aviation was recently the subject of thorough investigation by the Merchant Marine Committee of the House of Representatives. The Committee unanimously approved the idea of the unified service as being in the public interest.

Admiral Emory S. Land, Chairman of the War Shipping Administration, also gave his strong endorsement to the proposal in a public statement.

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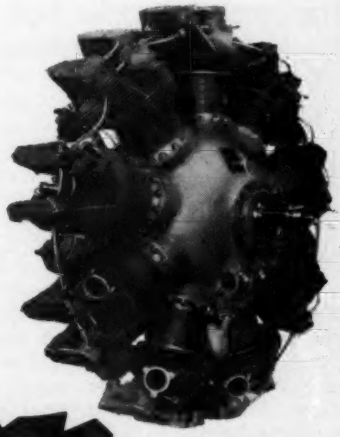

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IT'S AN Air WORLD

REG. U. S. PAT. OFF.

By L. A. GOLDSMITH, *Economic Analyst,* AIR TRANSPORTATION

WHEN Boston turns to the light fantastic by "saying it with" *Swedish* as a caption to advertise her interest in aviation, it certainly emphasizes the fact that IT'S AN AIR WORLD. The advertisement referred to appeared in a recent Sunday issue of *The New York Times* and it stresses both the City of Boston and the State of Massachusetts as being "NARMAST TILL STORRE," or, in plain language, "Closest to the Most."

Boston Takes to Swedish To Advertise That They Are "Closest to the Most"

Boston takes this opportunity to point out that "Sweden is only one of many major export markets closer to Boston by air or by sea than any first class American port." This fact is illustrated with one of the modern air maps which gives the impression that Boston is next door to every place. However, they concentrate on Sweden as an export market and point out that Sweden practically doubled its U. S. Imports just before the war.

Also, Swedish importers tell those of us in the United States who care to listen that they would like to do an increasing business with the U. S. A., imports and exports, when and as normal business can be resumed. Mr. Goran Holmquist, general manager of the Nordiska Kompaniet, Stockholm's unique and famous department store, gave an excellent talk on this subject at the December meeting of the Export Advertising Association. Sweden is setting her sights high for coming world trade expansion.

IN the days of the ancient Incas of Peru, they developed a very efficient *express service* of fleet-footed runners who could cover a thousand miles from Cuzco to Quito in less than eight days. There is even a record that on occasions of emergency the running time was cut down to five days, or an average of 200 miles a day, which is some going for foot work! In this way the royal table of the Inca was kept supplied with fresh fish, fluke and game from all parts of the Inca Empire.

Peru's Modern Aviation Routes Uphold Her High Standard For Transportation Facilities From The Ancient Days of the Incas

It is a far cry from the fleet-footed runners of the Royal Incas to the swift services of today's aviation. But down through the ages Peru has maintained a tradition of transportation excellence.

Starting from the Inca days with their *express* runners, they progressed through highways, waterways, railroads and motor roads, before they came to aviation. In fact, Peru boasts the highest railroad in the world, on the line from Lima to its terminal at Cerro de Pasco, which is recognized as the highest railroad station in the world.

Over a period of 15 years from 1928 to 1943, Peru's aviation has developed steadily upward. According to Peruvian Ministry of Aviation figures, the increase in Peru's air transportation between 1928 and 1943 is phenomenal. There are 5,000 miles of air lines in Peru and 50,000 miles are scheduled to be flown weekly over these lines.

In 1928 the number of passengers using aviation for transportation was 145. The number of miles flown was 73,254. In 1943 the number of passengers carried had reached 50,906. The number of miles flown had mounted to 2,699,216!

In South American aviation Peru follows Brazil, Colombia and Argentina in air routes and miles flown annually. The capital city, Lima, is one of the major stops on the aerial trunk routes covering South America. These trunk routes link the capitals of the ten South American Republics and also make connections with other global air routes.

Two air lines serve domestic traffic through Peru—the Compania de Aviacion Fawcett S.A. and Linea Aerea Nacional, generally termed LAN. Panagra (Pan American Grace Airways, Inc.) and Panair do Brazil (an affiliate of Pan American Airways) service Peru's International Aviation.

The country is air-minded and civil aviation services are constantly expanding. The President of Peru, Sr. Pardo, is deeply interested in aviation and has authorized the formation of the Peruvian Airport and Commercial Corporation.

The importance of Peru in intra-American aviation is a key factor in the future progress of air transportation and air-cargo shipping, because of the linking of the Atlantic and Pacific Oceans by air from Brazil on the Eastern Seaboard, to Peru on the West Coast of South America.

LAN will serve in the transcontinental air net work between the Atlantic and Pacific Oceans over the South American Continent between Brazil and Peru. According to the Bureau of Foreign and Domestic Commerce, the mileage schedule to be flown each week over this route will be more than 4,500 miles and will be over 832 unduplicated air route miles.

The Fawcett Line Airlines have a number of services both north and south from Lima. On their southbound trip from Lima to Arequipa, there is a non-stop flight of 490 miles which takes three hours.

For the tourist of the future, there would seem to be plenty of opportunities for travel by air within Peru to places of more than passing interest. The ancient city of Cuzco, with its nearby temples of Incan historic interest, will come within the possibility of a usual summer vacation. Or, perhaps the vacation trip would be scheduled to come down the west coast to Peru and then over the transcontinental network to Brazil and wing one's way home from the east coast.

There are so many possibilities, and while these trips will be undertaken for pleasure, the results in added dollar exchange will be very acceptable for creating more export-import trade between the U. S. A. and the southern republics of this hemisphere.

The distance which can be covered now by airplane in a few hours formerly took many days. In most cases the transportation difficulties were so great in trips to the interior, that many of the inland cities were virtually isolated for weeks and months at a time. Today this is all changed.

Consider, for instance, the trip from Lima to Iquitos, located in the Eastern interior of Peru, at the juncture of the rivers flowing into the Amazon. This trip formerly took five days via highway and steamer and numerous changes. It now takes five hours by plane. Iquitos is a name we will hear often in the near future. Iquitos has been a frontier trading post. Tomorrow it will be one of the well known crossroads of South America, and a connecting link for a projected route north to the Canal Zone and south to Buenos Aires.

Because of the great possibilities, in this magic of aviation, it might be well to look at the other side of the picture and listen to words of warning which follow in the next paragraph.

Air Marshal Bishop Warns That There is Danger in Thinking We Are Still Living in the Thirties

AVIATION had an *airing* over the air at the sixth Opera Victory Rally broadcast from the Metropolitan Opera House, New York City. This broadcast takes place every Saturday afternoon during one of the intermissions of the Opera and has a broad coverage not only in United States but all over Latin America and Canada.

On this particular broadcast the chief speaker was Air Marshal William A. Bishop, Director of Recruiting of the Royal Canadian Air Force and author on aviation subjects. He is naturally a strong advocate for using aviation in the ways of peacetime living and trading purposes. He knows better than most people the terrible dangers that lie in wait for us unless we learn to use the instruments of aviation for transportation and trade rather than for death and destruction.

In his talk, Air Marshal Bishop pointed out that "man's triumph over the air, and over the stratosphere itself, has put a weapon in his hands with which he may easily destroy our civilization, and himself unless he recognizes and accepts the conditions, which he himself has imposed. At the other end of the arc shines the hope that in man's use of the air for the common good of all lies our sure way to a durable and enduring peace."

The speaker further stressed "the danger of *nationalistic* thinking instead of *global*." To him it seems alarming that "so many of our leaders in the democracies still think that we are living in the same world that we knew in the Nineteen Thirties!"

LEGAL NOTES on Air Transportation

By GEORGE BOOCHEVER

Chairman, Legal Committee, Aviation Section, New York Board of Trade

IN the December issue, legislative enactments of 1944, which were to be enforced municipally, were reviewed. In this article, aeronautical law enactments which are to be state-enforced are considered.

Before making brief reference to the enactments, it should be mentioned that there were none which dealt with such subject matters as sovereignty in space, ownership of space, lawfulness of flight, damages to land, collision of aircraft, jurisdiction over crimes and torts, jurisdiction over contracts, dangerous flying as a misdemeanor, and hunting from aircraft as a misdemeanor.

There were enactments, Regulatory for Aviation in General, Regulatory for Commercial Aviation, Airports, Airport Zoning, Flight Strips, Taxes, Registration and License Fees, Aeronautical Research and Planning, Aeronautical Education, as well as several miscellaneous aeronautical laws.

Taking up the enactments by States:

ARIZONA: Memorialized Congress to pass Senate Bill 1432 or House of Representatives Bill 4079, extending the life of the Civilian Pilot Training Act to July 1, 1949.

CONNECTICUT: Amended Section 3092 of the general statutes to provide for operation of airports by the state or towns, giving them authority to take land by eminent domain. An owner of any privately owned airport established prior to July 1, 1929, was given similar rights when in the opinion of the commissioner of aeronautics and the advisory board on aeronautics public convenience or safety requires.

The power of the Governor to modify or suspend, in whole or in part, any statute, regulation or requirement which shall be in conflict with efficient and expeditious participation in the war effort, was extended until February 1, 1945.

KENTUCKY: Intrastate transportation of persons and property by aircraft for hire, etc., was authorized by the Kentucky Aeronautics Commission.

The Kentucky Aeronautics Commission was given jurisdiction and supervision over privately owned airports and landing-fields, and provision was made for the condemnation of land for airports and landing-fields, and for landing strips along highways; and for the improvement of airports by the extension of runways across certain inferior county roads and passways; and for the regulation thereof.

An enactment was made providing for amendment of the Kentucky State Constitution for dedication of motor fuel taxes and motor vehicle license fees to the highway function of the government.

LOUISIANA: Amended and re-enacted certain provisions of "An Act to Establish the Department of Public Works . . .," by including landing fields and other aeronautical facilities. The director of the department was authorized to enter into written contracts with the Federal Government or any agency thereof, or any political subdivision of the State or private individual for the construction, operation or maintenance of any public works which the department is authorized to administer under the act, and may receive and disburse grants of money from such agencies or persons for such purposes.

A joint resolution was passed proposing an amendment to the constitution rezoning ordinances, authorizing all municipalities to create airport zones, and to regulate the height of buildings, structures and objects of natural growth in areas surrounding airports. It also passed the Airport Zoning Act based upon the Model Airport Zoning Act prepared jointly by the Civil Aeronautics Authority and the National Institute of Municipal Law Officers, and endorsed by the Council of State Government.

The tax laws were amended with relation to "movable personal property" of public utilities and common carriers doing business within the State; also, a resolution was adopted proposing an amendment to the Constitution of the State designed to improve the situation as to payment of taxes in connection with the sale of gasoline or motor fuel for aircraft purposes. The existing law with reference to the tax of four cents a gallon, on gasoline or motor fuel used or consumed in the State for domestic consumption was broadened in the interests of aeronautics.

MASSACHUSETTS: Passed resolutions in favor of improved and additional airline service for the State.

MARYLAND: Adopted Model Airport Zoning Act, effective June 1, 1944, excepting, however, Baltimore County.

MICHIGAN: Appropriated $131,950 to the

Michigan Board of Aeronautics for the fiscal year ending June 30th, 1945.

It also passed an act to provide for the air marking of hazards; to authorize the State Board of Aeronautics to fix standards of height of structures, obstructions adjacent to airports, landing fields and seaplane harbors; to provide for condemnation proceedings; to provide penalties for violation of the act and to repeal all acts or parts of acts inconsistent with the provisions of this act.

MISSISSIPPI: Amended the Revenue Act of 1934 by including a tax equal to two percent of the gross income of those engaged in the business of operating an express business, transporting freight or passengers from one point to another in the State.

A joint committee of two members from the Senate and two from the House of Representatives was created with authority to investigate alleged evasions of the tax on gasoline and other petroleum products, etc. Twenty-five thousand dollars were appropriated for the purpose of defraying the expenses of the Gasoline Tax Investigating Committee.

NEW JERSEY: Prohibits the resale of tickets for passage of a person on a common carrier at an increase in price in excess of one dollar over the established rate for such passage. It also established a Department of Economic Development to study post war planning, including plans for airways and air terminals.

NEW YORK: Enacted the same type of law as did New Jersey, prohibiting resale of tickets for passage of a person on a common carrier at an increase in price in excess of one dollar over the established rate for such passage.

An appropriation was made to the Education Department for the cost of supervision of courses and other expenses incurred in connection with the organization, development and teaching of courses in junior aviation, aeroplane flight training and glider flight training in the public vocational and secondary schools of the State; provided for apportionment of moneys for that purpose.

It memorialized Congress to exclude specifically from its operation those fields of aviation jurisdiction properly reserved to the individual States; and to make certain that no State be deprived of the power to regulate aviation activities within that state, so long as such does not interfere with the enforcement of laws properly enacted by the Federal Government in the public interest.

Continued on page 42

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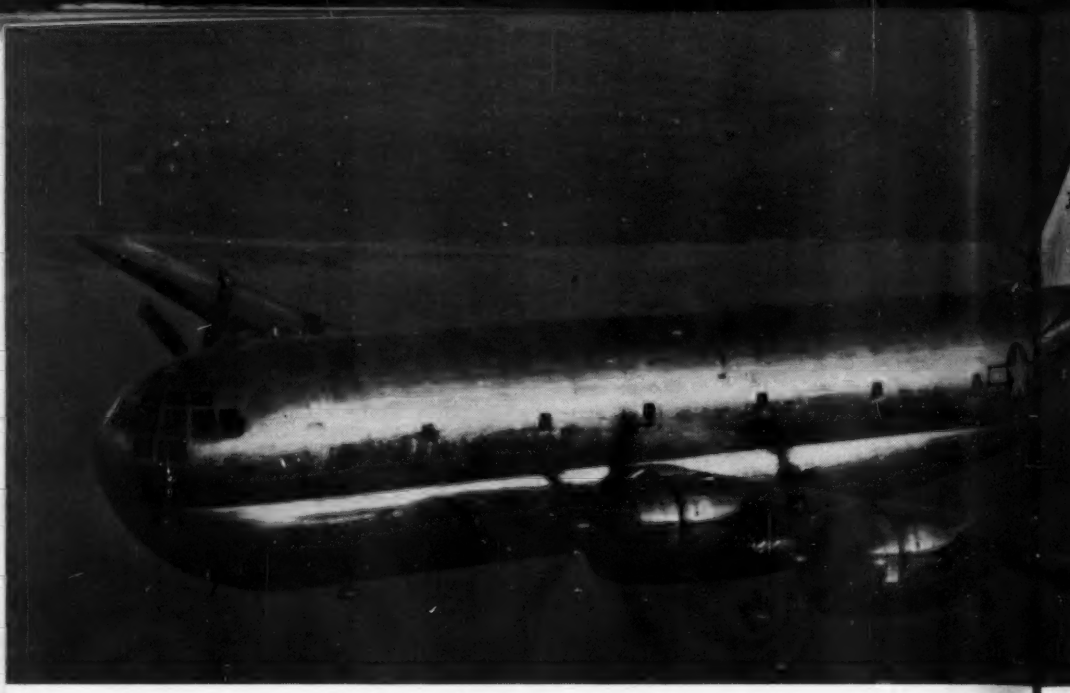

Boeing Announces New Huge Cargo Counterpart of the Superfortress

C-97 Is Also Capable of Transporting More Than 100 Fully Equipped Troops for Great Distances at Exceptionally Rapid Speeds

INITIAL details of a new super cargo and troop transport for the United States Army Air Forces—the Boeing C-97—were announced this month by the AAF and the Boeing Aircraft Company, following a series of highly successful test flights of the huge craft. Meanwhile, a new coast-to-coast flight record of six hours, three minutes, 50 seconds, has been chalked up by the C-97.

The plane is a transport counterpart of the Boeing B-29 *Superfortress* and exceeds all existing Army Air Force transports in range, payload and size.

It is capable of carrying more than 100 fully equipped troops for long distances at exceptionally high speed.

The C-97 was designed and built by Boeing at Seattle, under contract with the Air Technical Service Command of the AAF, whose Chief of Engineering and Procurement is Maj. Gen. K. B. Wolfe, former commanding general of the famed 20th Bomber Command. The huge plane was developed in close liaison with ATSC engineers.

A commercial version of the plane, to be known as the Boeing *Stratocruiser*, and capable of carrying up to 100 persons in luxurious comfort for operating ranges up to 3,500 miles with ample fuel reserves, already has been announced by the Boeing Company for postwar use.

TRANSPORT VERSION—This is a recent flight photo of the Boeing C-97, the transport-twin of the famous B-29 *Superfortress*. A double-decker, the huge plane is capable of carrying more than 100 fully equipped troops (or its peacetime luxury equivalent) for long distances at a high rate of speed.

A unique feature of the C-97 is a pair of great loading doors which open under the rear of the fuselage, with a drive-up ramp which is let down from within. The ramp is self-contained in the plane and is retracted into the airplane by an electrically powered cargo hoist, so that no special equipment is necessary on the field to load or unload the transport. Two fully-loaded ton and one-half trucks can be driven up the ramp into the airplane with plenty of room left for other equipment or cargo, or two light tanks can be accommodated. The cargo hoist operates on a ceiling rail along the entire length of the fuselage.

The C-97 utilizes the Boeing 117 low-drag wing and other aerodynamic advancements which have been proved on the B-29. Like the Boeing *Stratoliner* and the B-29, the new transport is pressurized for operation at high altitudes to provide the greatest possible comfort on long hops, so that troops will arrive at their destination fresh and ready for action. This feature is also advantageous when the plane is used as a hospital plane.

Engines of the initial C-97 are the same as those used on the B-29—2,200 horsepower Wright Cyclones, driving Hamilton Standard four-bladed propellers. For postwar airline operation Boeing has announced that the commercial versions will be equipped with engines expected to develop up to 3,500 horsepower each.

Details of the ship's performance, operating range, etc., like those of the B-29 *Superfortress*, are restricted for military reasons. However, the C-97 is larger, faster and will carry a greater load farther than any other military land transport. It is revealed to have a maximum speed of well over 300 miles per hour.

The C-97 has wings, tail surfaces and landing gear identical to those of the B-29, but the volume—10,000 cubic feet—is more than twice that of the B-29. It has usable cargo space

RECORD-BREAKING QUINTET — The five-man flight crew of the Boeing C-97 Army transport, photographed as they emerged from the giant four-engined plane at Washington National Airport, just having smashed all existing transcontinental records. They streaked from Seattle in six hours, three minutes, and 50 seconds. Top to bottom: A. L. Springer, maintenance supervisor; Clifford H. Dorman, radio operator (with hat); Kenneth J. Luplow, flight engineer; John B. Fornasero, co-pilot; A. Elliott Merrill, pilot; and Harold Mansfield, public relations manager for Boeing, who was on hand to greet the record-breaking crew.

almost equal to that of two average railway boxcars.

The plane is 110 feet, four inches long—12 feet longer than the B-29. Its wingspread of 141 feet, three inches, is the same as that of the *Superfortress*. Its design gross weight is 120,000 pounds.

The standard crew for the new sky giant will be composed of a pilot, co-pilot, flight engineer, radio operator and navigator. Conveniences have been installed which, in addition to the pressurized fuselage, add greatly to the comfort of the crew members for the long flights.

The two decks of the new airplane are achieved by building, in effect, one fuselage section on top of another, the upper section being longer and the two streamlining into each other. The bottom section is the same diameter as the B-29 and the top section considerably larger. A cross-section of the plane thus resembles an inverted figure 8.

This two-deck arrangement, with two separate cabins below and a main cabin 78 feet long above, allows unusual versatility in utilizing the airplane for military cargo.

To facilitate loading and unloading, the powered traverse hoist operates directly over the main loading doors so that a truck can be backed under it or loads can be picked up direct from the ground. The latest developments in cargo tie-down systems are included, which make obsolete former systems of ropes and nets. One method, for example, employs use of four large pallets which are preloaded on the ground and the cargo lashed down. The entire platform is then lifted into the ship and made fast.

BELLY VIEW—From below the latest Boeing four-engine plane, the C-97, looms gigantic. Like the *Superfortress* and the *Stratoliner*, the new transport is pressurized for operation at high altitudes to provide the greatest possible comfort on long hops.

SPEED AT A GLANCE—This chart illustrates graphically the speed of the Boeing C-97 transport on its transcontinental trip January 9 as compared with existing forms of transportation. The lines show the distance covered in six hours by bus, train, and present commercial airlines, all leaving Seattle at the same time.

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THE AIR AGE REACHES PARAGUAY

"Tomorrow's commerce has wings, and postwar distribution of commodities by airplane is expected to be a normal operation." Thus, Paraguay, tucked away in South America, has its big chance to cash in on its fertile soil and as yet unharnessed tremendous water power.

By MARY B. MACKRILL
Industrial Projects Unit
Bureau of Foreign and Domestic Commerce

PARAGUAY was the last of the countries of the Western Hemisphere to be served by the inter-American network of airlines. This nation, though it has no land bordering upon the sea, is almost completely encircled by rivers which for centuries have carried the country's commerce. The Rio Paraguay, an important water artery of trade, rises in Brazil, skirts along the Bolivian border, flows through Paraguay dividing it into two distinct parts, for 200 miles separates it from Argentina, and then merges with the Rio Paraná and the Rio de La Plata to provide travel to the South Atlantic. These rivers have played a dominant role through the centuries, but rivers are subject to droughts which curtail their full use. Will they continue to dominate the traffic picture in postwar years in Paraguay? Tomorrow's commerce has wings, and postwar distribution of commodities by airplane is expected to be a normal operation.

Flying boats and land planes of five international carriers supply air services to Paraguay. These lines connect with the aerial trade routes which serve the Western Hemisphere and reach Europe via trans-Atlantic air services.

Asunción, Marketing Center

Asunción, some 1,000 miles from the Atlantic, is the center of the transportation systems, and the assembling and distributing port for most of Paraguay's commerce. The airport facilities for the capital are located seven miles east of the city.

Surface travel between Asunción and the capitals of the three contiguous nations—Argentina on the east, west, and south, Brazil on the north and east, and Bolivia on the west and north—has been a time-consuming journey throughout the years; but in this air age travel time is cut to a matter of hours.

For example, travel by water from Buenos Aires to Asunción requires 76 hours; the international train between these points reduces the time to 56 hours; and airways require but four hours. Surface travel between Rio de Janeiro and Asunción is a steamer trip by sea to Buenos Aires and up the rivers, or to Puerto Esperanza, Brazil, by rail and down the Rio Paraguay. Scheduled air travel time between the two capitals is approximately six hours. No direct railroad or highways connect Asunción with La Paz, Bolivia. To make this trip, one must journey by rail to Buenos Aires from La Paz, which requires 78 hours, after which the traveler may complete the trip either by steamer up the rivers to Asunción, or by rail to Posadas and cross by ferry to Encarnación, thence by rail over the Paraguay Central Railway (one of the oldest railway lines in South America), a distance of more than 3,000 miles. The flight by air is over a 1,428 mile route.

Regular steamship service is provided along the Upper Parana to the falls of Iguassú, one of the world's scenic, majestic spectacles, sharing its beauty internationally with Paraguay, Argentina, and Brazil.

Steamship services are maintained from Buenos Aires and Montevideo to Asunción, and regular river steamers continue north to Corumbá, Brazil, Puerto Suarez, Bolivia, and to Cuyaba, capital of the State of Matto Grosso, Brazil. It is estimated that river traffic between Asunción and ports of Argentina and Uruguay during normal times totals from 300,000 to 350,000 tons per year.

Paraguay, an inland country, has not developed extensive highway and railway transportation facilities. How to get its farm and other products to market has been a problem. Westward from the Rio Paraguay is a narrow forest belt which stretches away to grassy plains cut by sprawling rivers which make an intricate pattern as they lose themselves in the mysterious swamps and green forests of the Gran Chaco or El Chaco Boreal. In the eastern section are the tropical or subtropical forests, low grasslands, and a plateau that varies from 1,000 to 2,000 feet in elevation. This nation with a million inhabitants (the smallest population of any of the South American republics) has an area of 177,000 square miles or about twice the size of Great Britain, which has an estimated population of 46,381,000 (1939). Paraguay has less than 800 miles of railroads compared with Great Britain's 20,000 miles of track. There are 3,760 miles of highway and 2,550 miles of unduplicated air routes over which 4,820 miles are scheduled to be flown each week. The republic has two commercial airports at the two largest cities, Asunción and Concepción, both on the Rio Paraguay. Highways, the major railway, a 33-mile public-service line and seven industrial short railways draining surrounding areas of raw materials, terminate at ports on the Rio Paraguay. Surface transportation charges are higher than for countries bordering on the sea, which reduces the differential between air and surface rates.

Extensive Air Lines

Air service is provided by the international operations of Pan American Airways, Inc. (PAA) which supplies weekly round trip service between Rio de Janeiro and Buenos Aires via Asunción. One of Panair do Brasil's routes (an affiliate of Pan American Airways), parallels that of Pan American Airways, Inc., through Rio de Janeiro, Sao Paulo, Curitiba, Foz do Iguassu, and Asunción, but does not go south to Buenos Aires. Instead, it terminates at Campo Grande, in the State of Matto Grosso, Brazil. This service is over a 1330 mile route and consists of one round trip weekly in each direction.

The Author

An Iowan by birth, Mary B. MacKrill was educated at State College, California, and Columbia University, New York City. She taught school in Nebraska and her home state. It was at Boyles Business College, Omaha, Nebraska, that she held the rank of professor.

The author was for eight years the private secretary for a United States Representative from California. It was during this stint that she compiled the book, *How It Was Done And Why*, covering the Congressman's eight years in the House. She has been a free lance writer for 15 years.

For two years she held the position of state president (California) of the National League of American Pen Women, as well as organizer and president of the Pan American League in Southern California, and editor of *The Modern Club Woman*. The writer has been with the Bureau of Foreign and Domestic Commerce since 1939 in various administrative posts. At the present time she is business assistant in the Industrial Projects Unit, specializing in transportation.

Correio Aereo Nacional operates a mail route between Rio de Janeiro and Asunción. It is understood that the route is available on occasion for freight and passengers.

Flying boats of Corporación, Sud-Americana de Servicos Aereas, S.A., leave Buenos Aires and continue northward along the Rio Paraná with stops at the Argentine cities of Santa Fe, Barranqueras, and Formosa, and proceed to Asunción. Round trips over this 735-mile route, with overnight stops at Asunción, are made twice weekly.

Líneas Aéreas del Estado (Laso) of Argentina, is operated by the Army Aviation Command. It is made up of Línea Aérea Sud Oeste (Laso) and Línea Aérea Nord Este (Lane). The latter line opened regular weekly service for mail and passengers from Buenos Aires, Argentina. Planes depart from El Palomar, the airport for Buenos Aires, and continue to Ciudad Yerua, Monte Caseros, Posadas, Cataratas del Iguazú (which is opposite Foz do Iguassú, Brazil), and Asunción. The second day there is a return flight over the same route to Buenos Aires.

Línea Aéreas de Transporte Nacional (LATN), a domestic service, was organized in July and provides operations within Paraguay. It is made up of Línea Aérea Norte Oeste (Lano); Línea Aérea Sur Este (Lase), and Línea Aérea Este (Lae). Lano supplies a twice weekly round-trip operation in the Chaco, from Nu Guazú to Fortin General Diaz, with intermediate stops. Lano and Lae offer weekly flights from Nu Guazu to small towns, many of which are flag or prior advice stops.

The comparatively small area of Paraguay is not indicative of the potentialities of its fertile soil and tremendous water power yet

to be harnessed. Aviation is the key to unlock the door for shipments of the nation's natural resources where time is a decisive element.

What is Paraguay's future in air cargo transport? Time savings are relative. Time is money, or is it? It is when the time for shipping a commodity is one hour in place of one week; or 20 hours instead of 18 days. In the United States, air transportation of cargo can reduce shipping time from a matter of days to hours. In Latin America, however, the time saving made possible by air transportation facilities is in a much greater range, namely from weeks to days, and days to hours. The appraisal of time as an item of convenience and expense is going to be given grave consideration.

Cognizant of this situation, the Bureau of Foreign and Domestic Commerce is making an analysis of exports and imports from the ten South American republics from the standpoint of air cargo potentials.

From a study of Paraguay's trade, it has been found that there were 496 commodities shipped between the United States and Paraguay in 1939, 20 items of which were imports. Air cargo potentials are estimated to be about 30 percent of the total number, and approximately eight per cent of the total value of all commodities of trade. The number of export commodities which offer air cargo possibilities is more than 20 times as large as the number of import commodities. Paraguay's trade with the United States in 1939 was $672,433 for exports and $1,710,532 imports, or a total exchange of commodities valued at $2,382,965.

Air cargo potentials were obtained by segregating and designating commodities with a value of 50 cents a pound or over, those with a style factor, and those which are fragile or perishable, and the studies so far completed are based upon an analysis of these commodities.

With four centuries of history, the Republic of Paraguay is entering apparently upon a new era of development, and aviation will have an important part in this forward movement.

Jesse H. Jones, United States Secretary of Commerce, stated in the first issue of AIR TRANSPORTATION, October, 1942, Page 9:

"Every age writes its own geography, and ours is being written by the airplane, just as medieval geography was written by the sailing ships. The sky is the new frontier waiting to be explored and conquered."

How each nation develops the methods will be vital to its future economy, and Paraguay is aware of this situation.

Budd Re-elected

John F. Budd, editor and publisher of *Air Transportation*, has been re-elected chairman of the Aviation Section of the New York Board of Trade and elected a director of the board for a term of three years.

(*Trade Mark*)

Air Transport Association Reviews Achievements Of United States' 21 Airlines During Past Year

OPERATIONS of the 21 airlines of the United States during 1944 were keyed strictly to war purposes and many new marks were set in air transportation, according to a brief annual review issued by the Air Transport Association of America.

Eight of the lines continued to operate overseas routes to all theaters of war under contracts with the Army Transport Command and the Naval Air Transport Service, transporting troops, ammunition, equipment and various commodities used in warfare. Thousands of flights were operated and millions of miles were flown. Tons upon tons of cargo were transported, but the exact figures have not been announced, for security reasons. Meantime, 14 airlines operated domestic cargo routes for the Army and Navy for the greater part of the year, but these services were gradually taken over by the military.

On the home front the airlines also were engaged largely in the transport of passengers, mail, and cargo which had direct relation to winning the war. The number of planes in service increased to a total of 320 through the return of planes previously used by the Army for varying periods since Pearl Harbor. This number, however, still left the airlines short about 20 planes as compared with the total fleet of 358 in 1941. However, planes in service during 1944 were flown 11 to 12 hours daily as compared to seven to nine hours before Pearl Harbor.

Through higher utilization of equipment, it is estimated that the domestic lines were able to carry during the year about 62,133,104 pounds of express, not including huge quantities of strictly military tonnage, as compared to 57,543,591 pounds in 1943. In 1942, the figures stood at 42,625,398 pounds, while the total for 1941 was only 19,398,643 pounds.

In the transport of air mail, much of which had both direct and indirect bearing upon the war effort, it was estimated that the domestic lines had flown more than 85,803,000,000 pound miles for the year, as against 72,133,899,534 pound miles in 1943. Indicating the tremendous growth achieved, the same figures for 1941 stood at 26,236,027,723.

While transporting these large quantities of mail and express, the domestic lines were at the same time carrying passengers to the estimated number of 3,658,140. Of these, 1,985,395 traveled on priorities having direct bearing on the war effort. Of the remaining 1,672,745 passengers, many were traveling on essential business, while others included members of the armed forces on leave. The actual division stood at 54 percent priorities as against 61 percent in 1943. The total number of passengers carried in 1943 was 3,454,040, of which 2,106,964 had priority.

The passenger load factor in 1944 also reached a new high mark of about 92 percent, as against a 1943 figure of 82.28 percent, while the year previous it was 64.34 percent, and in 1935 stood at only 49.61 percent.

1944 a Tremendous Year For Pan Am's Clippers

Concurrent with the January 1 return of the transatlantic *Clippers* to full-time commercial operation, officials of Pan American World Airways at La Guardia Field, N. Y., disclosed that a record-breaking load of 1,120,654 pounds of U. S. and foreign mail was carried to and from New York City's international marine terminal during 1944.

It is estimated that such a burden is equivalent to almost 45 million letters—a new high in commercial transocean air cargo. V-mail, long associated with the *Clippers*, formed a large part of the cargo. In spanning the Atlantic 305 times on regularly scheduled flights, the 42-ton flying boats last year covered more than 1,571,000 air miles along routes that bind the United States to the British Isles, Europe, Africa and South America. Over the northern, middle and southern air tracks 13,723 passengers and 379,600 pounds of express were carried safely to their destination by the *Clippers*.

Mass movements of air passengers over long distances were brought into reality when two records were established over the south Atlantic run during the past year. In July, Capt. Fredrick K. Schader of Stamford, Connecticut, commanded a *Clipper* that carried 51 passengers—six more than ever carried before—from near Monrovia, Liberia, to Natal, Brazil. Five months later another high was established when Capt. Wallace D. Culbertson, of Greenwich, Connecticut, flying the same 1,870-mile run, carried 52 passengers aboard the flying boat under his command.

Airlines Clearing House Proves Self a Big Success

The Airlines Clearing House, Inc., established just a year ago to handle interline ticket settlements, will clear approximately 250,000 ticket accounts monthly, with a dollar volume of more than $7,500,000 by this month, E. I. Whyatt, vice president of Northwest Airlines and first president of the Clearing House, predicted a few days before the new year began.

In his report to participating airlines—all members of the Air Transport Association of America—Mr. Whyatt said the volume of business handled in September, 1944, was 65 percent higher than in January, 1944, the first month of operation; and that the clearing house could, if future business warrants, be expanded to include handling of interline scrip accounts and freight charges. The organization is the first of its kind to be set up to settle accounts covering tickets sold by one airline for passage on another, in both the United States and Canada.

(*Trade Mark*)

Winged Peace

Reading *Winged Peace* (Viking, $2.75) by Air Marshal William A. Bishop of the Royal Canadian Air Force gave me a jolt. Not that I needed that rude shake-up; I've been thinking along his lines for years. But Billy Bishop has managed successfully to inject a power into his book which strips to icy fact the stark question lying before man: Which shall it be—destruction or peace?

At this moment I have before me two short newspaper clippings: one, an ASSOCIATED PRESS dispatch, datelined San Antonio, Texas, June 16, 1944; and the other, a NEW YORK TIMES item, datelined Hamilton, New York, August 31, 1944. After these months of repose in my files, I have found, finally, a suitable spot for a relationship which, at the time, seemed more or less indistinct and even vague.

The AP dispatch read:

"Mrs. William Randolph, widow of the Army flier for whom Randolph Field was named, said today that she wished airplanes never had been invented.

"She made the statement after receiving word that her son, Second Lieut. Benjamin D. Randolph, 22, had been missing over France since June 3.

" 'It was on this same day in 1942 that my other son, William Read Randolph, 20, was killed in a plane crash while taking a civilian pilot course,' she said. 'Airplanes have taken all my family and they are good for nothing but destruction.'

"Her husband, Capt. William N. Randolph, was killed in an air crash in 1928."

The TIMES story, two-and-a-half months later, frankly a human interest story, said:

"Reporting 10 minutes late as a new student in Colgate University's Naval Academic Refresher Unit (V-7), Joe Lee Wilson, Jr., radarman of Valentine, Nebraska, was reminded by Lieut. Arthur Mooney of the necessity for punctuality.

" 'I am sorry to be late sir,' Wilson replied, 'but I thought I had done right well. You see, sir, I was in Africa yesterday.' "

Bishop has not wasted time. In 175 pages of reading matter, plus a number of interesting photographs and maps, the air hero of the First World War has poured information and opinion which might have gone into a book twice its size. He has pulled no punches and danced no waltzes of false sentimentality. It's either "winged peace or winged death." Which?

His pen is barbed when he approaches the myopic deeds of America's isolationists and Europe's appeasers. Japan, Bishop says, "saved the life of America by bombing Pearl Harbor." And then there is that awful truth: "It is eminently doubtful if many free men know to this day what they are really fighting for or against, choosing to believe the war is for national, not global, survival."

There is the crux! Global thinking is not globaloney. Global thinking does not mean that the American will cease acting like an American, or a Russian like a Russian, or a Hindu like a Hindu. Remember this: when Herr Hitler prepared his not-so-mad plans of conquest, he was doing some real, honest-to-goodness global thinking. We need this type of thinking—for peace and the insurance of it.

"When Blériot made the first Channel flight from France to Britain," Bishop writes, "the English-language newspapers the world over acclaimed the feat as an act of tremendous heroism and daring. The newspapers of Germany, however, took an entirely different view. Blériot's daring left them cold. What intrigued them was that the French aviator had ended the status of the United Kingdom as an island and made it a part of the European mainland . . ."

Today the identical situation applies to the whole world.

The author states dispassionately that the world is fortunate; that it seems the Good Lord has decided to give us another chance. For, had the start of the Second World War "been delayed for a period of 10 years, or perhaps only five, and the sciences associated with aerial combat had progressed during that period as they have progressed during the years of war, this would have been the war which would have ended the civilization we have erected."

". . . We have passed across the threshold of the Air Age, and must live in a world in which, in peace or war, for weal or woe, aviation will be the touchstone of our whole way of life," according to the air marshal. And then he goes on to ask that frightening question: "Where do we go from here?"

Again and again Billy Bishop stresses that men are within reach of each other; that "we are sitting on each other's laps." Where do we go from here? Well, declares the author, the air is global; and the use of that global air requires an outlook of global partnership. Why torture ourselves in masochistic frenzy with periodic arms races when there are "boons to be conferred on mankind through the air"?

No traditions, no customs, no ways of life are sacrificed in sensible international cooperation. The author would like to see a world citizenship superimposed upon national citizenship. Aviation must be controlled as a means of destruction; it must be developed "for the good of all men and the peace of the world."

The late Wendell L. Willkie would have liked *Winged Peace.*

The Coming Air Age

Another fine book, but of another sort, is Reginald M. Cleveland and Leslie E. Neville's *The Coming Air Age* (Whittlesey House, $2.75). Apparently there is some disagreement between Billy Bishop and the Messrs. Cleveland and Neville. Where the former has asserted that we already are in the Air Age, the co-authors claim that it is "coming."

This volume, 359 pages in addition to pictures and maps, begins with the peace, and then proceeds to outline and discuss the air world of tomorrow. The new geography, freedom of the air, the airline of the future, air cargo, tomorrow's planes, private flying, airports, air traffic control, education, a global aerial police force—these subjects are probed with a sensitive touch, and the results are entirely satisfactory.

The authors point out that with the close of the war "the aviation industry may have to shrink its 20 billion dollars' annual output by 95 percent." And what about the Federal Government's expected 25 billion dollars' worth of surplus war equipment and supplies? Should this quantity be dumped upon the world market? Cleveland and Neville are certain that it would mean the wreck of "the economics of the entire aviation industry."

Destroying outright a part of the "existing postwar air fleet" would be practical, indeed, the authors argue. Upon that revolves a ticklish problem. The writers feel that "it is unlikely that the American taxpayer will be farsighted enough to accept it willingly."

Internationalism has its problems. It is no easy road for the United Nations to traverse. Cleveland and Neville feel that "the degree of true internationalism accepted by the governments of the United States, Great Britain, the

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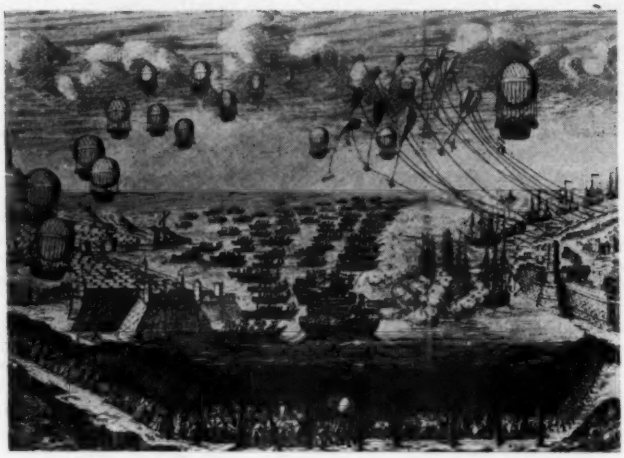
Agents Throughout the World



THE NAPOLEONIC IDEA—Standing upon the shores of France, 135 years before Hitler, Napoleon contemplated an invasion of Britain by air, sea, and undersea tunnel. This scene is from an old print shown in Universal's "World Without Borders."

Soviet Union, and China will probably be the limiting factor in air transport development for many years to come."

Cold water is poured on those aviation enthusiasts who expect overnight creations. It is emphasized that the first streamlined train required a full year's labor to style after the completion and approval of its design; that the same job on a fireproof ship took 20 months. Everyone is talking about the "family helicopter." Two years must pass between the final touch on its design and the appearance of the first production model. Didn't it take the aviation industry 18 months to convert to war production? the authors of *The Coming Air Age* demand.

Don't ask for too much in the beginning. "The war," they say, "has been a false dawn, but the industry's postwar plan is to fulfill the promise that the Wrights saw in another not so distant dawn at Kitty Hawk."

In their chapter on air cargo, Cleveland and Neville relate that if there is anything anyone wishes to purchase, and that article is ready to be sold, it is no more than 60 hours away from possession. This, certainly, is a great point for any international airline at which to pound away hammer and tongs. As the GEORGE S. MAY BUSINESS FOUNDATION pointed out in its recent survey featured in last month's AIR TRANSPORTATION, "there is an astounding lack of information on the part of the shipping public regarding the services and advantages offered by air cargo." The promoters of air cargo have got to wake up!

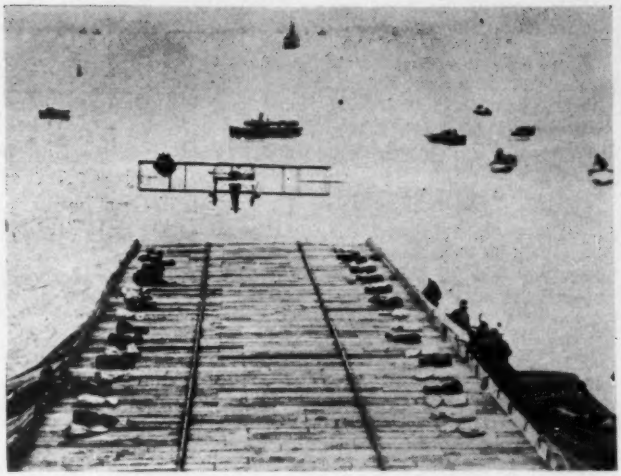
There are limitations at the moment. For example, precious stones can be carried through the air quite profitably for the gem merchant; but airborne coffee from Colombia might quadruple the price of each pound. However, the authors underline the fact that these limitations are "so flimsy that airmen and economists, statisticians and geographers, engineers and operators are working day and night to destroy them." *There will be global air cargo.*

World Without Borders

Full awareness of the air came with the Second World War. When Hermann Goering's Luftwaffe loosed its lethal bombs on Warsaw, Rotterdam, and London, all America's eyes were jerked aloft. To be sure, there were some who dared set themselves up as spokesmen, yelling against preparedness in the air, just as they howled against preparedness on land and sea—but Pearl Harbor, "the day that will live in infamy," stripped them of their vocal chords and of what prestige they had.

The war wrought a tremendous change. No longer do the feats of our planes amaze us. We take the amazing cargo-carrying records of the Air Transport Command and the Naval Air Transport Service as calmly as we read a timetable in Grand Central Station. Five thousand-plane raids on the Nazis have ceased to thrill us and step up the heartbeat. The long-distance strikes against Japan proper by the B-29 *Superfortresses* do not get the black banner headlines they earned before. We have come to accept the airplane, not as a modern miracle (as we did not very many months ago), but as an indispensable part of life and living. Today it is war, and the plane is a weapon; tomorrow there will be peace, and it will carry our goods and ourselves.

That we are looking to the sky for tomorrow is brought out in a hundred ways: lectures, forums on the air, college courses, new literature, the international civil aviation conference in Chicago, etc. And now Universal Pictures, in step with the times, has issued a cinematic history combined with a "glimpse into the future," entitled, *World Without Borders.*



SUCCESSFUL LANDING— The first landings of planes on ships were fraught with hazard for the crews of both. Here is one of the first successful landings on a covered deck of the U. S. S. Pennsylvania. This photograph was taken some 31 years ago.

There is the story of Montgolfier, the Frenchman, who, 162 years ago, invented a hot air balloon which stayed aloft for all of 10 minutes. Fourteen years later Garnerin made the first parachute descent. Napoleon is credited with being the first man to contemplate an invasion of Britain by air. This was to have been complemented by naval craft and an undersea tunnel.

Lilienthal, who built the first glider, made some 2,000 flights. The picture, of course, does not neglect the Wright Brothers and the Kitty Hawk flight. But there also is that curious story of another pair of flying brothers —the Gilmores—who were refused a patent on a heavier-than-air ship five years before the Wrights ever flew. The authorities contended a heavier-than-air ship would never fly and that the idea alluded to perpetual motion.

World Without Borders states that the Gilmores' early model was the first cabin passenger plane, the first monoplane, and the first to mount a screw propeller on the nose of a ship. Why did it never fly? The Gilmores always lacked funds to purchase suitable motors. What's more, the Gilmores, who are still alive and possess certain patent papers to prove their claims, flew robot gliders with electric magnetic remote control over distances of more than a mile, returning to the starting point.

Right down the line does the Universal featurette go—through the NC-4 Atlantic crossing; the first experimental take-off of a plane from the U. S. S. Pennsylvania (today this battlewagon catapults its four planes); vertical flying planes; the autogyro; helicopter; and even the late Gen. Billy Mitchell's famous prediction of 1937 in which he warned that the next war would be with Japan and urged the United States to establish a large force of aircraft in Alaska. War shots also are included in the flicker. But what the layman probably will find to his greatest interest is the projection of Pan American's timetable for 1948, which features a $75 round trip to Bermuda from New York.

The pictures derives its title from the discard of the conventional map. For example, a flight to Hongkong would entail traveling near the North Pole. Actually, the new map has destroyed American isolation forever.

Moore-McCormack Seeks Air Service to South America

Moore-McCormack Lines, Inc., in a brief filed with the Civil Aeronautics Board in support of its application to operate an air service between New York and South America's east coast, stressed the great volume of traffic which may be expected out of New York destined for that area.

In its brief Moore-McCormack stated that considering all factors and particularly in view of the great volume of traffic out of New York a certificate of convenience and necessity might be awardable to Pan American between New York and the east coast of South America. It added, however, that it is fair and just to say that Moore-McCormack has an equitable and historic priority to engage in air commerce over this route equivalent to the grandfather rights of airlines which are provided for by the CAB.

Growth of the American Merchant Marine, so necessary to the national defense, will be impaired unless air transport is made an integral part of an American shipping company when its trade route is invaded and paralleled by air service, the brief said.

Moore-McCormack has extensive and complete agency organizations, most of them wholly owned subsidiaries in a large number of countries.

Legal Notes

Continued from page 29

The general municipal law was amended in relation to the acquisition of real property for airports and landing fields, and a further amendment was made as to the acquisition of real property for airports and landing fields in the County of Suffolk, by extending the duration of the provisions thereof to July 1st, 1945.

It also passed a law relating to the financing of airports and airport improvements by municipalities by setting up a fund for each airport, acquired, constructed or maintained by a municipal corporation to be known as the Airport Development Fund. All payment for leases, permits or other privileges at such airport and all moneys paid into such fund are to be used solely for the acquisition, construction or physical development of such airport. Provision was also made for an Airport Amortization Fund.

RHODE ISLAND: Extended certain emergency powers conferred upon the Governor and State Council of Defense to March 31, 1945.

It also memorialized Congress with relation to the following matters: to receive a reconsideration by the Civil Aeronautics Board of the decision of its examiner in relation to airline applications to operate in the Rhode Island area for routes to the South and West; to extend half fare in matter of transportation and franking privilege to trainees of American Merchant Marine, while going through boot-training; and to give consideration to subject of granting of permits to competing transcontinental airlines in order that all communities in New England may have a rightful place in the air world. It also memorialized the CAB with relation to the needs and importance of Rhode Island in the program for the Northeast and Eastern airlines.

VIRGINIA: Passed a comprehensive act dealing with air carriers, air transportation brokers, the regulation, etc., of owners and operators of aircraft for intrastate air transportation and the regulation thereof.

The State Highway Commission was authorized to cooperate with agencies of the United States in constructing and maintaining flight strips, airfields and roads leading thereto and to exercise the power of eminent domain as may be needed, and the conveyance of such flight strips, airfields and roads to the United States.

The State Highway Department was authorized to build roads to airports and landing fields and to pay the cost of such roads out of highway funds. It was authorized in cooperation with the Commission to construct, maintain and improve airports, landing fields and other aviation facilities licensed for public use, actual cost to be paid by the Division of Aeronautics.

The State Highway Commission was authorized to cooperate with the agencies of the United States in constructing and maintaining flight strips, airfields and roads leading thereto and exercise the power of eminent domain as may be needed, and was authorized to convey such flight strips, airfields and roads to the United States.

The licensing of aircraft and airmen and airports was provided for as well as the regulation of rates, fees and charges for the use and the disposition of the fees under the act by the State Corporation Commission of Virginia.

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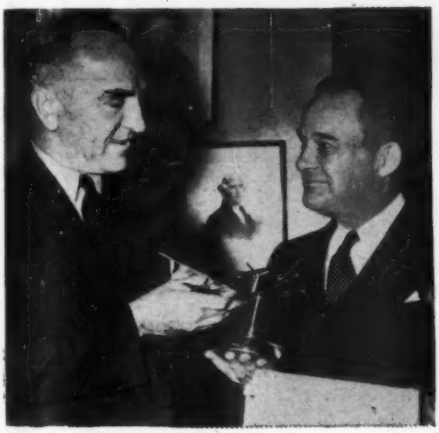
Customs Office Opened At LaGuardia Airfield

A new United States Customs entry office has been opened at the Marine Terminal, LaGuardia Field, New York. This was aimed at streamlining the clearance of imports arriving on transatlantic planes.

The new service was set up by Harry M. Durning, Customs Collector of the Port of New York. He has designated Deputy Collector Joseph J. Burton to be in charge.

It was declared by Mr. Durning that the new office would make it possible in some instances to clear imports within an hour after arrival. Before the installation of the new system imports of dutiable merchandise had to travel from the airport to the Custom House in Manhattan—a procedure requiring from two to seven days.

AERIAL TRUCK HORSE—Fairchild's C-82, dubbed "the truck horse of the sky," created a stir when it was made known that the cargo-carrying plane was in the 50,000-pound class. Having a range of 3,500 miles, the big plane boasted a wing span of 106 feet. It was estimated that the C-82 could carry 76 passengers by day and 30 by night in upper and lower berths. As a luxury liner it would carry 50 passengers and could be converted to freight in less than an hour.

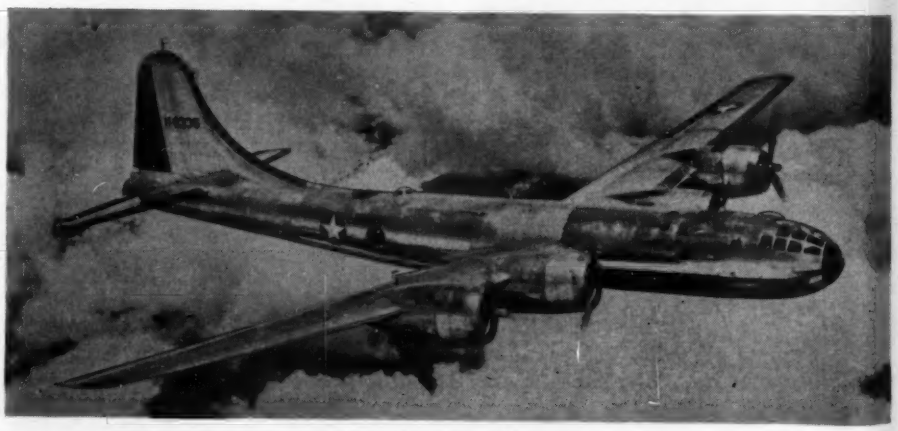


LOOKING AHEAD — Postwar orders became the style of the day as things began to look darker for a certain ex-house-painter whose initials are A. H. Capt. Eddie Rickenbacker, president of Eastern Air Lines, and C. W. Vaughan, president of Curtiss-Wright, posed for this picture after signing Eastern's $25,000,000 expansion order. Within a few weeks similar orders were signed by others, one of which was a $50,000,000 contract for Douglas planes.

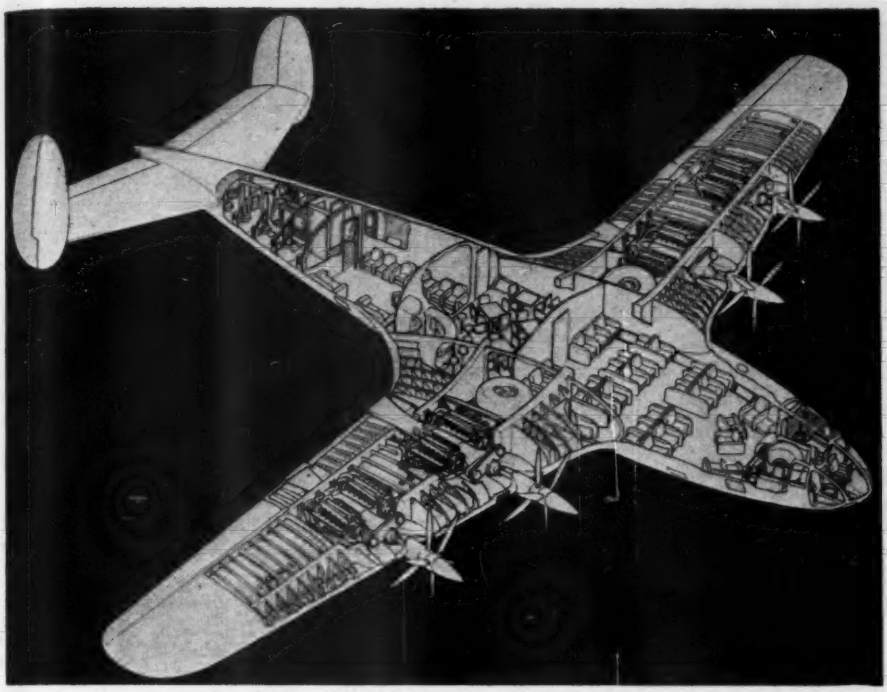
SPOTLIGHT on 1944

AIR PACKAGING FORUM—The first national air cargo packaging forum, held at the Hotel Pennsylvania, New York, was the private brainchild of the New York Board of Trade's Aviation Section, whose chairman is John F. Budd, editor and publisher of AIR TRANSPORTATION. It was a momentous forward-step in highlighting an inseparable part of successful cargo flying. Examining a simulated gold brick are (left to right): Budd; Lyle C. Ray, executive vice president of the Aviation Packaging Company; Brig. Gen. John M. Clark; Brig. Gen. William E. Farthing; and Matthew G. Ely, president of the New York Board of Trade.

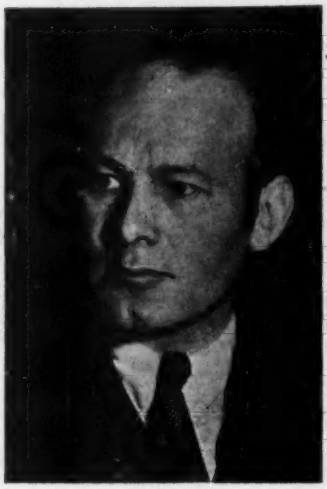
AIRBORNE FOOD—Transporting food through the sky loomed as an increasingly important question during the year. In March a group of Wayne University professors, headed by Dr. Spencer A. Larsen, forecast that in the postwar period fresh produce alone will furnish enough air cargo to exceed the combined weights of all commodities carried by air in 1941 more than 233 times—provided the ton-mile rate drops to five cents. Shown admiring a "plane" of airborne foods are (left to right): L. Welch Pogue, chairman of the Civil Aeronautics Board; Dr. Larsen; Claude R. Wickard, Secretary of Agriculture; and Col. Edward S. Evans, president of the Evans Products Company.



GIANT OF THE SKIES—Boeing's B-29, the *Superfortress*, was the greatest single stride in bringing Japan and other far-flung enemy points in the Pacific war within reach of American vengeance. But what this gigantic plane is doing in war time in carrying heavy weights long distances may well be expected to be nosed into commercial channels when peace becomes a reality.



BRITISH IDEA FOR TRANSOCEAN AIRLINERS—In March Frederick George Miles, noted British designer, came through with his version of what an international airliner should be like. Conceived as long ago as 1935, *Miles X*, as he called it at the time, was aimed at a cruising speed of 350 miles an hour. Of "convenient size," the "X" was planned for journeys of from 500 to 3,000 miles. According to the Briton, "it may take anything from 10 to 20 years for the taste and need for travel to grow beyond our present imagination." It was Mr. Miles' opinion that there is a long road of development ahead for air transportation in spite of the rapid progress made to date.



WARNING ON CIVIL AVIATION—Commander Stephen King-Hall, RN (Retired), an Independent Nationalist Member of Parliament, stated quite unequivocally that "the manner in which the international political problems of civil aviation are dealt with after the war will be the test case in the whole problem of world relations between the sovereign states." He added that the man-in-the-street was certain to look at it that way. But, if "cooperative agreement could not be reached between the nations about the use of civil aircraft," he ventured to predict that "more and more terrible wars are waiting over the horizon of time."

VAST POSSIBILITIES—A careful analysis by Dr. J. Parker Van Zandt of the Brookings institution resulted in his statement that within 10 years after the termination of the war technological improvements and operations in volume will cause air travel rates to nosedive to three cents a mile. He termed the possibilities of air transportation "undreamed of," pointing to another survey which revealed a potential travel volume of 4,000,000 overseas trips a year.

PREDICTS SUPER SPEEDS—A firm believer in the steady progress of air transportation, Jack Frye, president of Transcontinent and Western Air, stated that he expected to see in the postwar years a New York-Los Angeles run taking only six hours. The Chicago-London run would take only 15 hours, he predicted, and no port in the world would be more than 26 hours away.

FOR MERITORIOUS SERVICE—Mayor Fiorello H. LaGuardia of New York (right) presenting a certificate of merit to L. Welch Pogue, chairman of the Civil Aeronautics Board. Mr. Pogue's outstanding work in furthering the cause of civil aviation was recognized in the award made by the Aviation Section of the New York Board of Trade at the international civil aviation luncheon in the Commodore Hotel on January 24. John F. Budd, editor and publisher and chairman of the dynamic Aviation Section (center), looks on approvingly.

Reductions Up to 40% in Domestic Rates on Certain Perishables Are Effected by Braniff as Experiment

REDUCTIONS up to 40 percent in Braniff Airways' domestic air express rates on certain perishable commodities, including fresh fruits, vegetables, mushrooms, seafoods and fish, were made effective January 1. The new rates, offered over the routes of Braniff Airways, are an experiment to determine what volume of traffic may be developed at a lower cost to the shipper. The tariff as filed will expire April, 1945, although it is subject to cancellation, change or extension.

Guy M. Springer, Jr., air mail and air cargo traffic manager, stated:

"These reduced air express rates are the lowest in existence within the United States for comparable size shipments. Braniff has instructed the air express division of the Railway Express Agency to publish these reduced rates which will provide pick-up and delivery service for each shipment without additional cost to the shipper or receiver. One of the innovations in the Braniff service includes the acceptance of reservations for 50 pounds or more of these commodities.

"We hope that this new service will encourage and permit the sound development of air shipment of perishable commodities. If it is proved that these commodities can be delivered successfully without refrigeration, we will have progressed far in the development of air cargo transportation. We believe that these rates will be of special interest to two different types of shippers: the producer of various perishables who cannot now move his shipments over long distances because of slow transportation and the specialty shipper who is now shipping small baskets and boxes of these commodities.

"For the first time, vine and tree-ripened fresh fruits and vetetables from the Rio Grande Valley will be available to the consumer in remote markets. It will now be possible, for instance, for Chicago restaurant and market patrons to obtain fresh figs from Houston and fresh shrimp, seafood, fruits and vegetables from Corpus Christi and Brownsville. Also available for consumers in distant cities will be Colorado fresh mountain trout and high quality mushrooms which may be shipped daily during the growing season. Research on the shipment of perishable commodities has already proved that fruits and vegetables picked ripe instead of green and shipped by air have a higher vitamin content, better flavor and less shrinkage."

How to Get Overseas Air Priorities Is Explained by Department of State

In pursuance of the procedure described in the War Department's recent announcement regarding the movement of non-military traffic on foreign routes of the Army Air Transport Command, the Department of State and American diplomatic and consular establishments abroad are prepared now to receive applications for air priorities on behalf of passengers and shippers of cargo who are able to meet the priority requirements for the use of planes of the ATC and the Naval Air Transport Service.

Such traffic will include non-military and non-naval cargo, and passengers certified by the State Department as being in the national interest because its transportation will contribute directly or indirectly to the war effort; or to relief or rehabilitation activities in areas affected by the war; or to the resumption of economic or other activities disrupted by the war that are necessary for the prompt reestablishment of peacetime conditions, and that such traffic is of sufficient importance to justify travel by air and cannot reasonably be handled by a domestic civil air carrier.

Applications will be received from individuals, representatives of business firms, religious, educational and philanthropic organizations, United States Government civilian agencies, or agencies of foreign governments. The forms for applying for transportation are obtainable from the Department of State, Diplomatic and Consular establishments abroad, passport agencies in the United States, the Bureau of Foreign and Domestic Commerce in Washington and the 26 regional offices of the Department of Commerce

throughout the United States. The applications of representatives of business firms for passenger transportation may be filed with the Bureau of Foreign and Domestic Commerce or the regional offices. Other applications should be filed direct with the Department of State.

The Department of State and its representatives abroad will maintain close liaison with the priority officers of both the ATC and the NATS and certify only such non-war traffic as can be moved on the air transport facilities of the armed services in space not required for war purposes. Certifications will also be made only when United States commercial airline facilities cannot fill the need and when the traffic is of such importance as to justify movement by air.

Since both the ATC and the NATS do not anticipate that much space will be available in the near future for the movement of non-war effort traffic, arrangements have been made whereby the overflow of passengers who cannot be moved because of the lack of space may be carried on American flag vessels under the control of the War Shipping Administration, the Army and the Navy.

Travelers have been warned to be in possession of passports validated for the desired countries of travel and visaed for those countries. Evidence of effective inoculations against typhoid, paratyphoid, and typhus, and vaccination against smallpox is required for travel on most American facilities. In addition, travel to some areas requires inoculations against yellow fever and in some seasons, against cholera. The procurement of a passport and the completion of travel arrangements should be accomplished simultaneously in order to avoid confusion and delay.

New Milestones Marked In Airborne Vegetables

TWO more milestones in air transportation were reached last month when a 5,700-pound load was flown from California to Denver to mark the first regular airborne commercial shipment of vegetables to be made from the Pacific coast and the first commercial shipment in which products went unconsigned and were sold outright.

Lettuce, celery and broccoli in 50 wirebound crates specially designed to save weight and space were included in the history making air cargo which left Salinas, California, on Sunday, December 10, at 6 p. m., bound for Cleveland, Ohio.

The shipment, however, did not reach its eastern destination but was grounded by bad weather in Denver, where the unconsigned cargo was sold. The grounding of the ship brought up the ever-present problem in air commerce of airborne perishables; but the unconsigned nature of the shipment resulted in no financial loss caused by the grounding; and plans for the second shipment scheduled by the Ralph E. Myers Co. on the following Sunday, from Salinas to Boston, went ahead. Each of the following shipments on consecutive Sundays was still slated by the Myers Company for other eastern markets.

TWO MORE FIRSTS—Shown above is the loading of vegetables which marked the first regular airborne commercial shipment of vegetables from the Pacific Coast and the first commercial shipment in history in which products went unconsigned. Wirebound crates were specially designed and constructed to save valuable weight and space in the cargoliner.

All cargoes throughout the four Sundays of January and the first Sunday of February will continue unconsigned, and will be sold outright. Transactions will be direct, between grower, shipper and retailer, thus eliminating two brokerages.

On future shipments, sprouts as well as lettuce, celery and broccoli will go in wirebound crates. No ice will be used in any of the packages. Instead, instructions to pilots are to hold temperatures to 45 degrees and never lower than 35.

The airborne vegetables leaving Salinas on Sundays during December, January and early February are scheduled for sale to housewives in eastern markets on the following Tuesday morning, and will thus be found on eastern dinner tables within 48 hours after they left California.

Pilots, Not Planes, Are What Airlines Want Most Currently

It was pointed out this month that commercial airlines have no special needs for additional planes at the present time; but that not only is there a dearth of pilots, there is also a great deal of trouble getting Army planes reconverted for civilian use.

Before Pearl Harbor the commercial lines in the United States owned a total of 358 planes. Of this number, 314 were of the 21-passenger type and the balance averaged 14 seats.

With the recent allotment of aircraft to these lines, the current total has been upped to 345—mostly big planes. Under the circumstances, the actual plane shortage (using December, 1939 as a base) is only 13 units.

However, it is reported that only 50 craft more than the 200 permitted before President Roosevelt lifted restrictions several weeks ago are in service. The rest of the planes are still awaiting or are in the process of reconversion. An interesting note is the fact that the currently operating fleet, because of increased hours in the air, is providing at least as many seating units as before the war.

Before the Japs struck, it took three crews to keep a plane in the air for an average of 240 hours. At that time a pilot was limited to 85 hours' flying time per month. Today the ceiling has been lifted to 100 hours; the plane's monthly hours, meanwhile, has been raised to 400. Result: the number of crews required to maintain each plane now stands at four and five.

Eastern Aircraft Issues Its History

An impressive history of the Eastern Aircraft Division of the General Motors Corporation has been published by that company. It is dedicated "to the employes of Eastern Aircraft whose hearts and hands have made this achievement possible."

The volume is profusely illustrated. Besides detailing the history of the company, the authors have paid tribute to each of the five plants: at Linden, New Jersey; Trenton, New Jersey; Bloomfield, New Jersey; Tarrytown, New York; and Baltimore, Maryland. The foreword was written by L. C. Goad.

Newfoundland Assures Use Of Its Airports for Liners Flying North Atlantic Route

Newfoundland has given assurance that its airport facilities will be made available for airlines crossing the North Atlantic. The island is commonly known as the most important stepping-stone to Europe.

At the same time it was indicated in a statement given through the British Embassy in Washington that London is in full accord with the action taken by Newfoundland.

The Commission of Government in Newfoundland had requested the United Kingdom to withdraw a reservation written in the Two Freedoms (See December, 1944, issue; Page 42) drawn up at the Chicago conference last November.

Under the reservation, Newfoundland was not included in the mutual exchange of the privilege to fly scheduled aircraft across the territory of another nation without stopping or to make non-traffic stops. The latter included refueling, servicing, weather refuge, or taking aboard stores needed for the operation of the plane.

The Newfoundland Commission, in its official statement, said it had come to the conclusion, "having regard to the situation of Newfoundland in relation to international air routes and its possession of large land and sea airports, the maintenance of which will involve very large annual outlays, that the interest of Newfoundland will be best served in the future by the widest possible use of such airports as Newfoundland may designate as airports for international air services.

"The Commission is fully convinced that the greatest benefit to Newfoundland will be derived from a policy of encouraging maximum number of aircraft to use its airports, and in the long run the employment which will thus be created, the revenue from landing fees and the facilities which may be made available for passengers and cargo traffic to and from the island will far outweigh any temporary immediate benefits . . . ."

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PAA Will Reduce Charges And Premiums on March 1

Effective March 1, Pan American Airways will reduce its valuation charges, which are assessed against all shipments as part of the transportation charge. Also on that date, there will become effective a drop in the premiums of insurance against all risks, except legal seizure and war risk, under PAA's Shipper's Open Policy. The latter is available to shippers of all commodities except livestock, perishables, and radio and X-ray tubes.

Following are the two categories affected by the changes. It will be noted that the insurance rates are divided into general cargo and valuable cargo.

VALUATION CHARGES

Present	*March 1*
$.17 per $100	$.15 per $100
$.20 " "	$.17 " "
$.35 " "	$.32 " "
$.45 " "	$.43 " "
$.60 " "	$.58 " "

GENERAL CARGO

Present	*March 1*
$.08 per $100	$.06 per $100
$.10 " "	$.07 " "
$.18 " "	$.15 " "
$.22 " "	$.20 " "
$.35 " "	$.33 " "

VALUABLE CARGO

Present	*March 1*
$.06 per $100	$.04 per $100
$.08 " "	$.06 " "
$.14 " "	$.12 " "
$.18 " "	$.15 " "
$.28 " "	$.25 " "

Last Year Best in 27, Asserts Hunter of NWA

Northwest Airlines carried more revenue passengers, air mail and express during 1944 than in any previous year in its 27-year history, Croil Hunter, NWA president and general manager, disclosed in an official report.

The report showed increases of nearly 100 percent in the number of revenue passengers and revenue passenger miles over the previous year. During the year, Northwest planes, flying between Chicago, Milwaukee, the Twin Cities and the Pacific Northwest, carried 182,157 revenue passengers, compared with 93,494 a year ago. These passengers were carried a total of 120,834,296 revenue passenger miles, compared with 63,787,683 in 1943.

All-time monthly records were set in August, September and October, Mr. Hunter said. Nearly two-thirds of the totals for the year were carried during the last six months when daily round trip flights between Chicago and the Pacific Northwest were increased to five and between Chicago and the Twin Cities to 12. Previous record number of revenue passengers was 127,946 carried in 1941.

Mr. Hunter pointed out that 1944 also produced all-time record loads in air mail and express, with 5,800,229 pounds of mail carried a total of 4,900,654,197 pound miles, and 2,031,630 pounds of express carried a total of 1,243,140,412 pound miles.

REA Goes 25.9% Over 1943 Record at LaGuardia Port

A history-making total of 699,357 air express shipments were handled at LaGuardia Field in 1944, topping 1943's all-time high by 25.9 per cent, the Air Express Division of Railway Express Agency announced late last month.

In weight totals, this volume of business set another spectacular record with an estimated 10,135,000 pounds forwarded and received at the field, as compared with about 8,111,000 pounds in 1943.

Except for July, normally a light month for air traffic, monthly totals never dipped below the 50,000 shipment mark, while in December an all-time peak of 90,023 shipments were handled at the field. In 1943, air express shipments went over the 50,000 mark only in December when they reached 65,013.

1944 Was PCA's Biggest Year, Report Declares

Pennsylvania-Central Airlines has recorded the biggest year in its history, according to the 1944 report by PCA Treasurer Raymond G. Lochiel.

Last year PCA transported 433,584 war-busy passengers, an increase of 77 per cent over the 244,961 passengers carried in 1943. Airmail transported over the company's system increased 22 per cent over 1943 figures, with 5,572,516 pounds boarded on PCA's *Capitaliners*. A total of 4,889,270 pounds of air express—much of it emanating from Detroit—bettered the 1943 volume of 4,357,938 pounds of PCA-carried air express.

Miami Takes Steps In Tiff With New York

At the conclusion of a two-day conference of mayors in Miami to consider the Florida city's importance as outlet for a natural flow of air traffic to Latin America, the officials resolved that each city represented would request permission of the Civil Aeronautics Board to intervene in Miami's behalf in cases relative to Latin American air routes.

Cities coming to Miami's aid, with the claim that Manhattan is a less direct port of entry for southern and middle states, are Detroit, Cincinnati, Birmingham, Nashville and Tampa. Forty-four municipalities and the legislatures of sixteen states will be asked to back Miami's claim as the inter-American air terminal against New York City.

TCA Smashes Own Ocean-Hop Record

A new westbound transatlantic record has been established by Trans-Canada Air Lines. The time—11 hours and 26 minutes—is half an hour faster than the previous record, made last August by another TCA aircraft in the transatlantic service.

The non-stop flight, from the United Kingdom to Montreal, was made in a big Lancaster, piloted by Capt. J. R. Bowker, of Ottawa, a veteran TCA pilot. Other members of the crew on the new record flight were Second Captain M. Gauthier, of Montreal; F. B. Gregory, RCAF, of Victoria, navigator; and W. A. Tritter, of Calgary, radio officer. There were six passengers on board, as well as 2,996 pounds of mail and 161 pounds of express.

Capt. Gauthier now holds the distinction of being a member of the crew on both eastbound and westbound record flights, he being co-pilot of the record-breaking eastbound trip of 10 hours and 13 minutes made last month.

Return of Planes Reflects In PCA Financial Statement

The return to Pennsylvania-Central Airlines from the Government of 10 airplanes during the year, resulting in considerably increased flight schedules, made possible a net profit for the first ten months of the year of $427,045, according to PCA Treasurer Raymond G. Lochiel. The total operating profit for the ten months of 1944 is $851,206, as compared with an operating profit of $587,081 for the same period of last year. The net income for the first ten months of '43 was $277,245.

Lyall, Tuttle Active

Two men who contributed greatly to the success of the recent international civil aviation luncheon in New York's Commodore Hotel were Herbert J. Lyall and Robert Tuttle of American Airlines. The affair was sponsored by the Aviation Section of the New York Board of Trade.

Show-Cause Order Given Four Lines

The Civil Aeronautics Board today issued orders directing American Airlines, Eastern Air Lines, Transcontinental and Western Air, and United Air Lines to show cause why their mail rates should not be reduced from 60 cents to 32 cents per ton-mile of mail carried. Concurrently with the mail rate orders, the board issued an order instituting a general investigation of the rates, fares and charges for the transportation of property by the domestic air carriers.

Lower Passenger Rates Are Filed by United

W. A. Patterson, president of United Air Lines, has announced the filing of a new tariff calling for 10 percent reduction in passenger fares and an additional five percent reduction on round-trip tickets, Government travel, and to holders of volume travel plan cards. He said that "United's substantial cut in passenger fares is not designed to increase traffic as our loads are practically capacity now, but these rate reductions will pass on to the public the lower rates to which users of the airlines are entitled when an airline's financial position enables it to make reductions."

Delta Gains Display Steady Upward Swing

Delta Air Lines reported its passenger traffic for the year 1944 will exceed last year's total by 51 percent and represents a 4,080 percent increase over the year 1935.

Delta flew 65,838,063 revenue passenger miles in 1944, a gain of 51.7 percent over the total of 43,389,764 for 1943. Passengers carried in 1944 totaled 174,750, compared with 110,437 in 1943, a 57.3 percent increase. Mail pound miles amounted to 2,058,543,291 for the year 1944, an increase of 49.6 percent over the 1,375,729,134 in the previous year. Air express over the line increased 45 percent, from 236,055,752 pound miles for 1943 to 343,755,582 in 1944.

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CONGRATULATIONS FROM A. T.

Jacqueline Cochran

TO Jacqueline Cochran elected to the Board of Directors of Northeast Airlines, who now has the distinction of having become the first woman to serve as a director of an air passenger transportation company.

In making the announcement, NEA directors pointed out that air travel by women is expected to increase greatly in volume during the postwar period, and it was deemed proper that this large segment of the traveling public should be represented in the direction of the company.

Miss Cochran is the noted aviatrix, holder of numerous world air records, who has been serving with the Army Air Forces as Director of Women Pilots and head of the WASPS. She was a close friend of the late Amelia Earhart, one of the founders of NEA.

TO Raymond E. Montgomery, formerly assistant to the special representative for Panagra in Miami, Florida, who has been appointed to succeed Richard H. Eggleston, special representative there, recently retired from active service for reasons of health.

Before joining Pan American-Grace Airways, Mr. Montgomery was associated with the traffic department of United Air Lines. Prior to that he was affiliated with the investment houses of Francis I. du Pont and Company. and Winthrop Whitehouse and Company of New York. Mr. Montgomery has spent much time in foreign travel and was educated at the University of Bordeaux in France.

TO Robert F. Six, president of Continental Air Lines, who returned to his airline after serving for nearly two years as a member of the Air Transport Command.

Robert F. Six

He entered the ATC as a captain in September, 1942, and had achieved the rank of lieutenant colonel when he was returned to inactive status because of physical disabilities received in line of duty. At the time of his release, he was deputy base commander and ranking officer at Morrison Field, West Palm Beach, Florida. In line with his duties there he made a number of trips to South America, surveying new routes between Palm Beach and Natal, Brazil, for the ATC. His overseas duties also included serving as commanding officer of a transport squadron in the South Pacific.

Continental's chief holds the Asiatic Pacific Theatre ribbon, the American Theatre ribbon, and the Campaign Star of Papua. An active flier, as well as an airline executive, Mr. Six has a commercial pilot license and is one of the two airline presidents in America who has been checked out to fly four-engine planes. In addition, he has qualified as first pilot on practically every type of Army bomber and is rated as a senior service pilot by the Army.

He became president of Continental Air Lines (then Varney Air Transport Company) in February, 1938. Mr. Six had joined the company the previous year as executive vice president, after dissolving his own firm of Mouton and Six, a sales organization which sold Beechcraft planes in northern California, Oregon, and Washington.

TO Richard W. Sylvester, Panagra's new traffic manager for South America.

Mr. Sylvester, formerly special representative for Panagra at Balboa, Canal Zone, has been active in traffic sales since he joined the organization in 1940, and has traveled extensively over the Panagra Route. He was based for some time in Cali, Colombia and Lima, Peru. Before joining Panagra, Mr. Sylvester was associated with the traffic department of W. R. Grace & Company in New York.

R. W. Sylvester

He is a native of Cape May, N. J.

TO Paul E. Hovgard, widely-known aeronautical engineer and pilot, upon his appointment to the associate directorship of the research laboratory of Curtiss-Wright Corporation's Airplane Division at Buffalo.

Paul E. Hovgard

Mr. Hovgard served previously as director of flight test for the Airplane Division. In his new capacity, he will be associated with Dr. C. C. Furnas, research laboratory director in aerodynamic engineering, structures, flight test and other technical experimentation for which his background particularly suits him.

Born September 2, 1902, in Kansas, the son of a Methodist minister, Mr. Hovgard attended home-state colleges, entering the aviation field in 1926 with Travel Air. By 1927, he had become chief engineer of that firm.

Subsequently, he joined Keystone Aircraft Corporation and during his five years of service with that organization was project engineer, chief test pilot and research engineer. Four years of work with rotary wing aircraft development followed, as chief engineer of Kellett Autogiro and Pitcairn Autogiro, and test pilot and design engineer for Pennsylvania Aircraft Syndicate. A period of experimental and demonstration flight testing followed, with Mr. Hovgard flying for Curtiss-Wright, Loening, and Grumman. He is believed to have made more contract demonstrations than any other pilot. He twice earned membership in the Caterpillar Club when he was forced to parachute to earth.

He then spent three years on wind tunnel and flight research for Curtiss-Wright in Buffalo, before joining the Glenn L. Martin Company as chief research engineer and chief designer. After three years with Martin, he returned to Curtiss in Buffalo as technical assistant to the director of engineering, later becoming director of flight test.

TO William B. Briggs, an airline executive with 14 years' experience in the air transport industry in the east, who has been named assistant to the president of Northeast Airlines.

Mr. Briggs, former manager of special events at New York for Eastern Air Lines, will represent NEA in connection with the line's newly certificated Boston-New York route, due to open early this year.

A native of Washington, but recently a resident of New York, Mr. Briggs has been in commercial aviation since 1930, when he was associated with Paul F. Collins in the operation of Ludington Airlines, first New York-Washington air carrier. He has been with EAL since it absorbed Ludington in 1933, serving as assistant to the first vice president.

TO Florence Kerr, director of war public services of the Federal Works Agency in Washington, who has resigned that position to join Northwest Airlines as director of the women's division, traffic, promotion and public relations.

Florence Kerr

Her activities with NWA are devoted principally to stimulating interest among women in air travel. In many years of public service, Mrs. Kerr has held important positions in both state and Federal Government.

She was born in Harriman, Tennessee, attended high school in Marshalltown, Iowa and is a graduate of Grinnell college, where she later served as a member of the faculty. During World War I she was active in the Gulf division of the American Red Cross. She was a member of the governor's committee for unemployment relief in Iowa during the depression years.

TO L. B. Kinports, veteran in the travel agency field, who has assumed the duties of manager of United Air Lines, Foreign, Agency and Tour Department.

L. B. Kinports

Mr. Kinports will be located at the company's Chicago headquarters, to supervise United's postwar traffic solicitation activities in foreign countries, to supervise agency work domestically, and to handle tour promotions.

For the past four years president of the American Steamship and Tourist Agents Association, Mr. Kinports is a native of New York City. After completing his education at Yale and in New York, he was engaged in banking and statistical work, then entered the travel business in 1918. For over 20 years he was an officer and director of Gillespie, Kinports and Beard of New York.

In July, 1942, Mr. Kinports joined the office of the Coordinator of Inter-American Affairs, specializing in travel and air priorities. Subsequently he became director of the office's Service Operations Division, serving as liaison officer on plane priorities between the coordinator's office and the Air Transport Command, State Department and other government agencies.

TO dark-eyed, attractive 20-year-old Virginia DerBing, the first American girl of Chinese parentage to become an airline reservationist, currently at the Norfolk, Virginia, ticket office for Pennsylvania-Central Airlines.

Virginia DerBing

A former Cornell University student, the new PCA reservationist's formal education was disrupted by the death of her father in August. She was majoring in international relations, and hopes to combine both airline work and the development of Chinese-American relations after the war in China.

Miss DerBing's father's name, oddly enough, was Bing Der, but in the process of getting an American grammar school education the teachers decided her name should be Virginia DerBing—so that's what it remains. Der in Chinese represents "thanks."

TO Perley Boone, new director of press for the Air Transport Association of America, who established headquarters in the Washington offices of the organization on January 1.

Perley Boone

With a long background of newspaper and publicity experience Mr. Boone was for three years director of press for the New York World's Fair. In 1940 he conducted a national publicity campaign in favor of conscription which became law a year before Pearl Harbor. He resigned from the news staff of *The New York Times* to accept the appointment with the Air Transport Association.

TO Gilbert F. McKeon, who, as the result of an election, has been elevated to the position of vice president of the Manhattan Storage and Warehouse Company, New York City.

Gilbert F. McKeon

Mr. McKeon formerly held the post of assistant to the president of the company. Prior to his association with Manhattan, he was engaged in theatrical enterprises. In the capacity of theatre manager Mr. McKeon managed some of the largest motion picture houses in the country.

TO Paul W. Pate, whom Delta Air Lines recently named to the superintendency of a newly created air cargo department.

Paul W. Pate

Mr. Pate joined Delta's planning and research department in 1943 after seven years' experience in the field of motor transportation in Atlanta; Charlotte; Burlington, North Carolina; and Kingsport, Tennessee. A native of Savannah, he also served in the rate department of the Southern Motor Carriers Rate Conference, Atlanta.

C. E. Woolman, vice-president and general manager of Delta, in announcing Pate's appointment, said the new air cargo department would handle all phases of air express and air freight for the company. Before coming with Delta, Pate served 20 months in the Army Air Corps, handling troop and freight movements at Maxwell Field and Courtland, Alabama, Air Base.

Mason Mallory

Vernon Willis

TO Mason Mallory, former district traffic manager of Las Vegas, on his appointment as traffic manager for Rapid City and surrounding territory for Western Air Lines; and Vernon Willis, former traffic and publicity representative in San Francisco, now in the new post of district traffic manager of Las Vegas.

Prior to his Las Vegas appointment, Mallory was manager of Los Angeles industrial sales and instructor of traffic procedure classes for new employees. He joined Western in March, 1941.

Willis joined the airline in July, 1941, as a passenger service supplyman, and the following year, was appointed a passenger agent. He was transferred to the traffic department in San Francisco during April of this year. Las Vegas is familiar ground to Willis, who acted as a passenger agent there prior to his transfer to traffic. He conducted a radio aviation program over Station KENO while employed in the frontier town, and also served as president of the Las Vegas Junior Chamber of Commerce.

TO Charles A. Boillod, associated with domestic and international aviation for more than 16 years, who has been named by Northwest Airlines to the newly-created position of regional traffic manager, with headquarters in New York City.

Charles A. Boillod

He will have charge of all traffic activities in the eastern metropolitan area, into which NWA will fly for the first time when it begins operation on its new Seattle-New York route as soon as adequate equipment is made available by the Government.

Born in Switzerland, Mr. Boillod was educated at the University of Geneva and served as manufacturers' commission agent and representative in Europe, Asia, South America and the United States before entering the air transportation industry.

He joined Pan American Airways in 1928 as field representative in Santo Domingo and was associated with PAA 11 years. During that time Mr. Boillod served as district traffic manager, Havana; divisional traffic manager, Cuba; director of foreign trade development; assistant to the vice president-general traffic manager; and as sales manager. He came to American Airlines in 1940 as traffic manager in Newark, N. J., and a short time later became general traffic manager for American Airlines de Mexico, S. A., in Mexico, afterward being appointed director of the airline's foreign travel department.

TO Ted Rosen upon joining the public relations staff of the Air Express Division of Railway Express Agency.

Mr. Rosen is a newspaperman who was employed as reporter and editor by the New Brunswick (N. J.) *Daily Home News* and *Sunday Times*. Among his activities on the New Jersey papers were: staff reporter, columnist, feature editor and theatre editor.

TO R. L. Ellinger on his appointment as senior engineering representative on the Pacific Coast for Transcontinental & Western Air.

A 15-year veteran of TWA and predecessor Aero Corporation of California, Mr. Ellinger's career has extended over the entire development period of the modern air transport. He was connected directly with TWA's pioneering of the famous Douglas DC-1, and had an important role in the airline's purchase of the five Boeing Stratoliners and the Lockheed Constellation.

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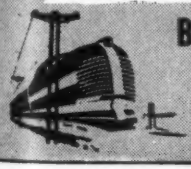

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TO O. Theodore Larson, who has returned to United Air Lines as assistant to J. A. Herlihy, vice president operations.

O. Theodore Larson

Mr. Larson first joined United Air Lines in 1929 as meteorologist at Omaha and was assistant superintendent of dispatch at the time he left the company in 1937 to go with TCA. In announcing the new move, Mr. Herlihy said Mr. Larson's assignment would be handling special problems connected with United's expanding operations. Mr. Larson leaves Trans Canada Airlines he served as vice president and general manager.

A native of Minnesota, he attended Madison, Minnesota, High School and was graduated from Gustavus Adolphus College at St. Peter, Minnesota, in 1926. He was associated with the airways weather division of the United States Weather Bureau at Detroit and Chicago from 1926 to 1929.

TO A. G. Kinsman, until recently head of Northwest Airlines passenger traffic department, who has been promoted to the position of Western traffic manager with administrative offices in Seattle.

A. G. Kinsman

A veteran in the air transportation field, Mr. Kinsman served as district traffic manager for the airline at Seattle before being transferred to the company's home offices in St. Paul to become head of the NWA passenger traffic department. He previously was associated with the old Boeing Air Transport company for which he was a passenger manager and Eastern traffic manager. Before coming to NWA, he was a district traffic manager for Hanford Airlines.

TO Robert Crabb, eastern sales representative for Pacific Division, Bendix Aviation Corporation, who has been appointed field engineer, assigned to airlines working out of the main plant at North Hollywood.

Robert Crabb

For the past two years Crabb has covered eastern territory handling radio and electrical items for the Pacific Division. Under the new assignment he will cover the entire country with North Hollywood as the home office.

Previous to joining the company Crabb owned and operated the Radio Communication Service at the Oakland Airport in Oakland, Cal., for two years. Before that he was with United Airlines in the traffic department. Crabb is a graduate of the University of Wisconsin.

TO Ed Herold, the new express and mail superintendent for Pan American Airway's Alaska Sector.

Ed Herold

Mr. Herold is one of those gentlemen who, after getting out of college, make a swing around the world and pick up a billion dollars' worth of information. And that's just what he did. When he received his BA degree in foreign trade at the University of Washington, he signed up as a crew member aboard freighters and visited the Orient and Europe.

For 10 years he was with the Grace Line, first in the freight department, and later as assistant traffic manager. An aviation enthusiast, he switched to Pan Am in 1942, starting out as traffic representative at Seattle. Before his promotion, Mr. Herold had reached the position of assistant to the traffic manager.

Aerovias Brasil Gets New Rio-Manaos Route

Aerovias Brasil, S. A. has been awarded a 1,800 mile route from Rio de Janeiro to Manaos by the Department of Civil Aeronautics in Brazil. This route, one of the most important links for post-war flying between the Americas, has to be in operation within 18 months.

AB has agreed to build or improve five landing strips between Leopoldina and Manaos. Three fields already exist but will require extension. Two new fields will have to be constructed. All five strips must be 4,500 feet long and 300 feet wide. The line also has guaranteed to operate at least one round trip a week on this service between Rio and Manaos.

N. Y. Aviation Given Boost By Gov. Dewey to Maintain State Commerce Leadership

Aviation played a large part in the momentous message to the New York State Legislature by Governor Thomas E. Dewey, earlier this month.

"A large field of opportunity for business and employment after the war will be provided by aviation," he declared. "As a part of its program to maintain New York's leadership in all forms of commerce and to add to the gainful opportunities of the citizens of the State, the State should give every encouragement to the aviation industry and to the development of aviation transportation as an integral part of our postwar economy."

Governor Dewey stated that three problems faced New York State and its localities:

1. "The promotion of aviation as a means of transportation and as an essential part of New York State's famed transportation network."

2. "Representation of the State and the aviation industry within the State in the Federal program, so that New York will have an official voice and authority to see that New York State and its subdivisions will not be by-passed in the development of the Federal program."

3. "Assistance to municipalities in the development of their airport facilities."

The Republican Party's standard bearer last year asserted that during 1944 the Department of Commerce of New York State studied many aspects of the aviation field. He suggested that the department be "designated as the clearing house for aviation problems and the agency to represent the State in dealing with the Federal Government and the localities to insure the orderly development of commercial and private aviation facilities on a State-wide basis."

Governor Dewey recommended that legislation be enacted at the current session of Legislature, "establishing the responsibilities of the Department of Commerce in the field of aviation."

Request Filed For Caribbean Route

An application for permission to operate a post-war air transportation service in the Caribbean region has been filed with the Civil Aeronautics Administration by the Atlantic, Gulf & West Indies Steamship Lines.

In a brief filed in support of the application, the company contends that permission to operate lines in the gulf area and southward is necessary for the company to maintain its 50-year-old transportation policies.

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Donald W. Douglas, president of the Douglas Aircraft, was elected chairman of the board of directors of the Aeronautical Chamber of Commerce, and Eugene E. Wilson, vice chairman of United Aircraft, was elected president of the chamber at the annual meeting of the organization. At the same time, the chamber announced that Lawrence D. Bell, president of Bell Aircraft, and La Motte T. Cohu, chairman of Northrop Aircraft, had been elected to the board of governors.

The first jet propulsion engine in this country free from foreign influence, is under development at Westinghouse for the Bureau of Aeronautics, Navy Department. When the development is completed, this new engine is expected to produce more pounds of thrust for a given amount of fuel and pounds of weight than any engines brought from Europe for study. This engine is expected to be important for future aircraft service.

The Civil Aeronautics Board authorized Northwest Airlines to establish a fourth transcontinental airline service by extending its route from Milwaukee to New York via Detroit. The extension was on condition that service between Milwaukee and New York via Detroit should be provided only on through planes originating and terminating at Minneapolis-St. Paul or points west.

CAB has permitted Pennsylvania Central Airlines to extend a line from Pittsburgh to New York on condition that service between those cities be provided on flights originating or terminating at Chicago or Knoxville, Tennessee, or points south of Knoxville. It also granted PCA's request for authority to operate directly between Chicago and Detroit.

United Airlines has won authorization to include Detroit as an intermediate stop between New York and Chicago, with the provision that Detroit should be served only through flights originating or terminating at Denver or points west. Detroit and Cleveland will not be served on the same schedule.

A new PAA night service between Mexico City and Balboa, Canal Zone, has cut transit time between the two cities from two days to 15½ hours, besides providing Guatemala, El Salvador, Honduras, Nicaragua and Costa Rica with new links to main air networks in the United States and South America.

Refusal to permit steamship companies to operate overseas airlines is viewed by Glenn L. Martin as a threat to the future of the American merchant marine. His views were given in a letter to the House Merchant Marine Committee, which recently recommended that American flag steamship lines be allowed to operate overseas air service.

Nine out of every 10 ATC airplanes taking off from California for the Philippines, Australia, and the vast network of Pacific islands are Douglas C-54 *Skymasters*, according to Lieut. Col. Arthur W. Stephenson, commanding officer of the ATC Fairfield-Suisun air base near Sacramento.

Two new airlines soon commence passenger operations from LaGuardia Airfield: PCA and NWA.

Agreement has been reached in general terms between the British and South African Governments on two proposed air services. One is virtually non-stop from Johannesburg to London and the other is slower with intermediate stops.

Braniff Airways inaugurated a new service between Colorado, Oklahoma, and Texas, with connections to and from Mexico, and reinstated air service between Oklahoma City and Amarillo.

On invitation of top officials of the U. S. Army Air Forces, Alfred Marchev, president of Republic Aviation Corporation, producers of the P-47 Thunderbolt, will visit war fronts in the Pacific as a member of a special mission that will include army officers and war plant executives.

Agreements providing for commercial air transport services between the United States and Denmark and Sweden were concluded last month by an exchange of notes. These agreements result from discussions between representatives of the respective countries at the recent International Civil Aviation Conference in Chicago, and incorporate the standard clauses adopted at the conference for use in bilateral agreements relating to scheduled air services.

Prizes totaling $7500 for outstanding achievement in airport development next year in the United States, to be known as the Andrew J. Haire Airports Awards, has been announced. The awards, designed to stimulate individual and community interest in construction of airplane landing facilities, will consist of a first prize of $5000, a second of $1000, a third of $500 and 10 of $100.

The new Western Division of the Traffic Department of Braniff Airways was made effective January 1. It is under the supervision of J. Kernan Weckbaugh, with headquarters at Denver.

The Joint Army-Navy Aircraft Committee is expected to order several types of warplanes in increased amounts. It is known that among the types will be the P-47 *Thunderbolt*, the new Douglas A-26 *Invader*, and the B-24 *Liberator*.

On the 15th of this month the reduction of air mail rates between the continental United States, including Alaska and Puerto Rico, the Virgin Islands and Hawaii went into effect. The new rate is eight cents per half-ounce between the United States and Puerto Rico or the Virgin Islands, as compared with 10 cents before the reduction; 15 cents a half-ounce between this country and Hawaii, as compared with 20 cents; and 23 cents a half-ounce to or from Puerto Rico or the Virgin Islands and Hawaii, as compared with 30 cents.

National Airlines reported on January 4 that two additional *Lodestar* transports had been added to its fleet. This brought to six the number added within three weeks.

Latest reports state that engineers at the Hughes Aircraft Company will soon unveil the largest airplane in the world—an eight-engine cargo transport flying boat.

The ultimate in speedy air travel—a 429-mile flight from Leningrad to Stockholm in five minutes—is planned by Pan American World Airways in its post-war globe-girdling services. The flight isn't made at a speed of 86 miles a minute; instead it crosses two time zones in the course of the relatively short flight and thus saves two hours enroute on the two hour-five minute flight.

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